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Budget SMITHSONIAN INSTITUTION

Budget Justifications

for

Fiscal Year 1976 and Transition Period



Submitted to the Committees on Appropriations

Congress of the United States

February 1975

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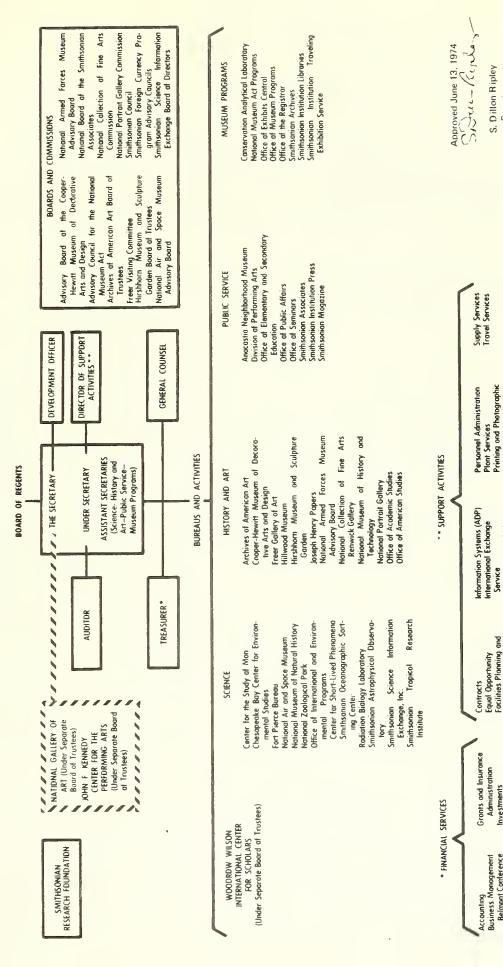


FISCAL YEAR 1976 AND TRANSITION PERIOD ESTIMATES OF APPROPRIATIONS

TABLE OF CONTENTS

		Page
OR	GANIZATION OF THE SMITHSONIAN INSTITUTION	
GE	NERAL STATEMENT	i
SA.	LARIES AND EXPENSES	Tab A
	Summary Tables	A-1
	Uncontrollable Increases	A-5
	Science	
	Office of the Assistant Secretary. National Museum of Natural History. Smithsonian Astrophysical Observatory. Smithsonian Tropical Research Institute. Radiation Biology Laboratory. Office of International and Environmental Programs. Chesapeake Bay Center for Environmental Studies. National Air and Space Museum. Center for the Study of Man. National Zoological Park.	A-13 A-16 A-20 A-23 A-25 A-27 A-29 A-32
	History and Art	
	Office of the Assistant Secretary. National Museum of History and Technology. National Collection of Fine Arts. National Portrait Gallery. Hirshhorn Museum and Sculpture Garden. Freer Gallery of Art. Archives of American Art. Cooper-Hewitt Museum of Decorative Arts and Design.	A-39 A-42 A-44 A-47 A-49 A-51
	Public Service	
	Office of the Assistant Secretary. Anacostia Neighborhood Museum. International Exchange Service. Division of Performing Arts. Office of Public Affairs. Smithsonian Institution Press.	A-58 A-60 A-61 A-63
	Museum Programs	
	Office of the Assistant Secretary. Office of the Registrar. Conservation-Analytical Laboratory. Smithsonian Institution Libraries. Office of Exhibits Central. Smithsonian Institution Traveling Exhibition Service. Smithsonian Archives. National Museum Act.	A-67 A-68 A-70 A-72 A-73 A-75

		Page
	Special Programs	
	Introduction. American Revolution Bicentennial Program. Environmental Sciences Program. Major Exhibition Program. Academic and Educational Programs. Smithsonian Research Awards Program.	A-78 A-79 A-82 A-83 A-84 A-86
	Administrative and Support Activities	
	Office of the Secretary. Office of the General Counsel. Office of the Treasurer. Office of Personnel Administration. Office of Audits. Office of Equal Opportunity. Office of Printing and Photographic Services. Information Systems Division. Office of Supply Services. Management Analysis Office. Office of Protection Services. Office of Facilities Planning and Engineering Services. Office of Plant Services.	A-87 A-88 A-89 A-91 A-92 A-93 A-95 A-96 A-98 A-100 A-102 A-103
	Transition Period (Salaries and Expenses)	A-105
SC	IENCE INFORMATION EXCHANGE	Tab B
	Fiscal Year 1976	B-1 B-4
4U	SEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)	Tab C
	Fiscal Year 1976	C-1 C-7
² A	CILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION	Tab D
	Summary	D-1
	Construction and Improvements, National Zoological Park Transition Period	D-2 D-12
	Restoration and Renovation of Buildings	D-16 D-20
	Construction	D-25
ŀΡ	PENDIX	Tab E
	Appropriation by Object Class, Salaries and Expenses	E-1 E-2 E-3



Secretary

Printing and Photographic

Protection Services

Management Analysis

Engineering Services

Programming and Budget

Smithsonian Museum

Shops

Investments

Belmont Conference Product Program Center



FISCAL YEAR 1976 ESTIMATES OF APPROPRIATIONS

GENERAL STATEMENT

Organization and Performance

Founded in 1846, the Smithsonian Institution is an independent establishment devoted to public education, basic research, and national service in the arts, sciences, and history. Centered on the Mall in Washington, D. C., it also operates major facilities and activities elsewhere in Washington, across the country, and overseas.

One of the world's leading research centers, the Smithsonian is also the world's largest museum complex, attracting, with the Zoo, approximately sixteen million visitors yearly as well as additional millions who view traveling exhibits. As custodian of the National Collections, it possesses more than seventy million objects and specimens, only a few percent of which are on public display while the rest are available for scholarly research by Smithsonian staff and many hundreds of visiting students, scientists, and historians each year.

The Smithsonian complex consists of ten major exhibition buildings in the fields of science, history, technology, and art; a zoological park and an animal conservation and research center near Front Royal, Virginia; a preservation and storage facility at Silver Hill, Md.; a conference center at Elkridge, Md.; two natural preserves, in Panama and on the Chesapeake Bay; the innovative Anacostia Neighborhood Museum which operates in a low-income area of the city in cooperation with the local community; an oceanographic sorting center in Tunisia, whose work parallels the programs of the Institution's oceanographic center in Washington; an observatory at Mt. Hopkins, Ariz.; and supporting administrative, laboratory, and storage areas.

A wide range of programs is conducted in cooperation with other institutions, universities, and government agencies here in the United States and on every continent. Many of the research projects in nations abroad are funded through the use of excess foreign currencies. More than 1,000 research publications, exhibit catalogues, education pamphlets, information leaflets, etc. were prepared in the past year. Other communication activities include radio, television, motion picture programs, the successful magazine, Smithsonian, which now has almost 700,000 subscribers, the Archives of American Art Journal, and the recently acquired Art Quarterly.

In FY 1976 major efforts are being directed toward completion of collections restoration and exhibits preparation required for the Institution's participation in the Washington, D. C. Bicentennial effort as well as for its contribution to commemorative activity across the Nation. A major element of the Institution's Bicentennial program is the opening of the National Air and Space Museum on July 4, 1976. In addition, high priority is being given to continuing phased implementation of the Master Plan for the improvement of the National Zoological Park's animal and visitor facilities.

Management Planning and Organizational Effectiveness

The second Belmont Conference was held in February 1974 to define goals and priorities for the coming year. Priorities established by the Conference include exhibits production (including traveling exhibits); collections acquisition and collections management, including conservation and restoration of objects; and the growth needs of the Zoo. Scientific research will also continue as a high priority of the Institution with particular importance being directed towards fellowships, distinguished curators, and project research. Other efforts have been made to strengthen and improve the information flow and decision-making processes among administrators and program and support managers. Significant among these efforts has been the creation of the Council of Directors and Administrative Officers Conference.

During FY 1974 and FY 1975, several important changes to the internal organization alignment of the Institution have been accomplished. These actions are designed to use current resources more effectively by aligning related or complementary functions or by strengthening the ability of certain major museums and galleries to administer directly key aspects of their programs. Manpower and dollar resources which are involved continue to be used for the purposes for which they were appropriated. Among the major changes are the following:

- --Transfer of exhibits design, production, and associated personnel and related resources from the Office of Exhibits Programs to the museums and galleries in order to unify and strengthen the exhibit presentation function with the equally important collections management and research functions of these museums and galleries. This transfer was begun in FY 1974 and completed in FY 1975. A small Office of Exhibits Central has been retained to serve the needs of units with no exhibits capability and to provide certain specialized services for all the museums.
- --Allocation among the units of printing funds formally centralized in the Smithsonian Institution Press. This will result in (1) each unit establishing the priorities for its manuscripts to be printed and (2) printing costs being shown as a function of program activity. Printing funds for certain Institution-wide publications were left with the Press.
- --Transfer of custodial and minor-maintenance personnel and associated resources from the Office of Plant Services to museums, galleries, and laboratories. These transfers will give to museum, gallery, and laboratory directors responsibility for the cleanliness and appearance of their buildings and give these essential employees a closer feeling of involvement with the public service programs they are helping to support.
- --Transfer of shipping funds formerly centralized in the Office of the Registrar to the units. Non-registration functions are being removed from the Office of the Registrar. This move recognizes the fact that shipping is an integral function of each museum's borrowing and lending programs and will result in the costs being shown as a function of program activity.
- --Transfer of personnel and associated resources from the Office of Elementary and Secondary Education to the museums and galleries. These transfers, begun in FY 1974, and completed in FY 1975, reflect that the development of public education programs goes hand-in-hand with the planning and presentation of exhibits. This transfer will also result in the costs being shown as a function of the program activity. A small central education office will continue to coordinate the education programs in the bureaus. This central office will also serve as a liaison with local school systems and will develop special outreach projects.
- --Transfer of funding for postage indicia from the Office of the Treasurer to the Office of Plant Services in order to combine all mail services in one office.
- --Transfer of personnel and associated resources for the Oceanographic Sorting Centers from the Office of International and Environmental Programs to the National Museum of Natural History in order that all natural science, collection-based activities be administered by a single bureau.
- --Transfer of positions and associated resources from the National Armed Forces Museum Advisory Board to the Museum of History and Technology to align the work of the Board with that of the recently established Eisenhower Institute, whose activities will center on the contributions that the Armed Forces of the U.S. have made to American society and culture.

Establishment of Position Ceiling

Over the past several years, inflation, in virtually all areas of expense, has gradually eroded the Institution's ability to fund positions for Congressionally approved programs. Additional positions have remained unfilled as program emphasis has changed or as a particular project has been completed. For the Office of Plant Services additional funds are requested in this budget to support positions which fall into the former category. In a further attempt to reflect more accurately the existing employment situation, the Institution has established the FY 1975 position total at 3,050.

For FY 1976 the Institution is requesting the following appropriations:

Salaries and Expenses	1975 Appropriations \$67,789,000	Requested 1975 Supplemental \$2,917,000	Requested 1976 Increase \$8,702,000	1976 Estimates \$79,408,000
Science Information Exchange	1,755,000	50,000	70,000	1,875,000
Special Foreign Currency Program	2,000,000	-0-	-0-	2,000,000
Construction and Improvements, National Zoological Park	9,420,000	-0-	130,000	9,550,000
Restoration and Renovation of Buildings	1,490,000	-0-	- 23,000	1,467,000
Construction (Appropriation to liquidate contract authority)	7,000,000	-0-	- 4,000,000	3,000,000
Totals	\$89,454,000	\$2,967,000	\$4,879,000	\$97,300,000

Highlights of the budget requests are as follows:

A. Salaries and Expenses

1974 Appropriation	1975 Estimate	1976 Estimate
\$58,868,000	\$70,706,000	\$79,408,000

This appropriation provides for the regular operating programs in the museums, galleries, zoological park, research laboratories, and other program units; for special programs of an Institution-wide nature (such as the American Revolution Bicentennial program); and for program support activities. This funding is allocated by major groups as follows: (Organizational allocation appears on pages A-2 and A-3.)

	1975 <u>Base</u>	Requested Increase	1976 Estimate
Science	\$26,774,000	\$3,202,000	\$29,976,000
History and Art	11,484,000	824,000	12,308,000
Public Service	2,102,000	134,000	2,236,000
Museum Programs	5,329,000	423,000	5,752,000
Special Programs	5,186,000	599,000	5,785,000
Administrative and			
Support Activities	19,831,000	3,520,000	23,351,000
Totals	\$70,706,000	\$8,702,000	\$79,408,000

The FY 1976 budget request continues to give high priority to the effort begun last year to strengthen support staffs. This budget also addresses high priority program needs—an area for which, excluding Bicentennial commitments, no additional resources were requested for FY 1975. The effects of inflation and the importance of the program activities, both in developing a better understanding of contemporary problems (i.e. environmental and energy-related issues) as well as in fulfilling the Institution's responsibilities to basic research and public education, strongly recommend their selective strengthening.

Major purposes to be served by the requested funding increase include:

1. Program Increases (Other than Bicentennial Related): \$4,551,000

- --Research to support on-going and important new programs in the areas of tropical biology, high energy astrophysics, optical and infrared astronomy, regulatory and environmental biology, ecosystem and land-use research, and anthropology. (\$410,000)
- --Collections Acquisitions to maintain a minimum acquisition program to supplement continued and active efforts to acquire gifts to the National Collections. Purchase funds are essential to acquire particular objects to establish fully representative reference collections or to display in new exhibitions. (\$110,000)
- --Collections Management to provide additional assistance for the care of the collections which grow at a substantial rate and are utilized increasingly, and to develop and maintain programs of animal care and propagation for the living collections at the Zoo. (\$207,000)
- --Exhibition to permit refurbishment and redesign of exhibit halls as well as animal habitats at the Zoo, aimed at increasing their educational usefulness, and to expand production capability of small but innovative exhibit programs. (\$143,000)
- --Education and Orientation to provide improved tour, orientation, and other information services to museum visitors, and to relate more effectively performing arts presentations to the museums and their collections. (\$105,000)
- --Conservation to improve the capability for specialized treatment, and analytical services required to prevent deterioration and loss of the collections. (\$42,000)
- --<u>Libraries</u> to permit the acquisition and processing of library materials as well as the preservation and conservation of rare and valuable materials in order to serve increasing research and exhibit efforts. (\$238,000)
- --Automatic Data Processing to reduce backlogs in the application of computer technology in the scientific research, collections management, and administrative areas. (\$26,000)
- -- Photography to improve production and management control of photographic services including the filing and retrieval of valuable negatives and transparencies. (\$19,000)
- --Archives to fund an oral history program designed to document the history of the Institution and to improve capabilities for processing and preparing a rapidly growing collection of documentary material on American art. (\$41,000)
- -- Protection to provide adequate protection and security of buildings, exhibits, collections, and visitors. (\$775,000)

- --Buildings and Facilities Management to fund custodial, maintenance, and transportation requirements, meet increased postage costs, and improve the capability for facilities planning and costing of construction projects (\$2,273,000)
- --General Administration to provide assistance in accounting, personnel, auditing, property administration, and supportive clerical work. (\$162,000)

2. Program Increases (Bicentennial Related): \$1,641,000

- --To meet the temporary need for increased maintenance, cleaning, protection, and visitor orientation services required by the larger visitor numbers and extended hours for buildings not previously open in the evenings. (\$400,000)
- --To assist in the preparation and installation of exhibits for the new National Air and Space Museum. (\$1,241,000)

3. Uncontrollable Increases: \$2,510,000

- --To fund the projected higher cost of current employees caused by legislated pay raises, within-grade step increases, extra work day, and Workmen's Compensation payments. (\$1,873,000)
- --To assist in funding very large rate increases for steam and electricity. (\$617,000)
- --To meet the increase in shipping rates for the international exchange of literary, scientific, and cultural publications. (\$20,000)

Included in the above program increases is an amount of \$166,000 for additional travel costs. Special attention is being drawn to this area because of its important relationship to the accomplishment of related program efforts. The purchasing power of travel funds in the base has continued to be eroded as a result of fare increases. Careful review is given to all travel requests and only that travel considered to be of the highest priority is approved. Purposes of travel include: 1) the accompaniment of rare objects loaned to the Institution by owners who would not lend otherwise, as well as the accompaniment of animals being temporarily relocated either for breeding purposes or due to Master Plan construction at the Zoo; 2) the management of traveling exhibitions; 3) the need to meet personally with prospective donors to review and/or encourage gifts to the National Collections; 4) regular on-site review and administration of bureaus located outside the Washington area; 5) participation in national and international conferences, lectures, and training sessions which enable participants to remain current on recent developments in their respective fields as well as to contribute to the diffusion of knowledge; 6) travel necessary to the conduct of certain research projects; and 7) review of contract performance of companies outside the Washington area (for example, the contracted exhibits production effort related to the opening of the National Air and Space Museum). One factor, in particular, has added to the rise in requested travel funds for FY 1976. That is the cost of participant travel associated with the Festival of American Folklife. It is anticipated that there will be as many as forty-five hundred participants.

It is requested that special consideration be given to increasing travel authority for the Institution to \$831,000.

B. Science Information Exchange (SIE)

1974 Appropriation	1975 Appropriation	1976 Estimate
\$1,695,000	\$1,805,000	\$1,875,000

The Science Information Exchange acquires, processes, stores, and provides information on research projects in progress as a service to the research community. A funding increase of \$70,000 will be used to develop and implement further the SIE machine-assisted indexing system, thereby improving input and processing time in subject areas of critical concern, and to expand efforts to encourage and provide for new state and local input into the Science Information Exchange system.

C. Special Foreign Currency Program

1974 Appropriation	1975 Appropriation	1976 Estimate
\$4,500,000	\$2,000,000	\$2,000,000

This appropriation will provide level funding to continue a program of grants to United States institutions for field research in those countries where "excess" local currencies are available. Research will be performed in the following general areas of Smithsonian Institution interest and competence: archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences, and museum programs. In addition, funds are included for the third of four annual payments, each of \$1,000,000 equivalent in "excess" Egyptian pounds, to UNESCO's international campaign to preserve archeological monuments in Nubia.

D. Facilities Planning, Renovation, Restoration, and Construction

1974 Appropriation	1975 Appropriation	1976 Estimate
\$21,860,000	\$17,910,000	\$14,017,000

- --Construction and Improvements, National Zoological Park (\$9,550,000) Continued phased implementation of the approved Master Plan by completion of
 the service facility and the construction and rehabilitation of bear exhibits;
 continued planning for the beaver, otter, seal, sea lion, and wolf exhibits;
 and design and installation of exhibit, orientation, and education graphics
 and street furniture. In addition, a program of repairs, renovation, and
 preventive maintenance of Zoo facilities in Rock Creek and at Front Royal,
 Virginia will continue.
- --Restoration and Renovation of Buildings (\$1,467,000) Continue projects such as road improvements at the Mt. Hopkins, Arizona, Observatory, the installation of fire detection and suppression systems, renovation of the Arts and Industries Building and the south yard area, planning for a sixth floor library and research center addition to the History and Technology Building, and general repairs and improvements to buildings and facilities.
- --Construction (\$3,000,000) Appropriation to liquidate contract authority for the completion of the National Air and Space Museum.

Details on each of these operating and construction programs appear in the following sections of this budget.

Tab A

SALARIES AND EXPENSES



SALARIES AND EXPENSES

Summary of Increase FY 1976

Appropriation, FY 1975	\$67,789,000				
Proposed Pay Supplemental	2,527,000				
Proposed Program Supplemental (Utility rate increase)	390,000				
Base, FY 1975	\$70,706,000				
FY 1976 Request	79,408,000				
Requested Increase	\$ 8,702,000				
Transition Period Estimate					
Transition Period Request	\$22,010,000				

SMITHSONIAN INSTITUTION
"Salaries and Expenses"
Summary of the 1974 Appropriation and the 1975 and 1976 Estimates

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	Estimate	Amount	338	10,030	3,716	1,332	1,631	586	539	5,537	385	5,882	29,976		267	5,395	2,247	1,686	1,625	458	337	1	293	12,308		215	469	212	402	317	621	2,236
	1976 I	Pos.	7	480	69	64	48	25	22	230	12	304	1,261		11	266	103	74	83	28	16	1	16	597		10	21	6	11	15	27	93
		Total	294	9,503	3,402	1,181	1,542	571	443	4,034	322	5,482	26,774		257	5,139	2,074	1,544	1,557	410	294	1	209	11,484		209	423	187	371	307	605	2,102
Estimate	Supple-	mental	2	334	61	71	44	16	14	85	18	398	1,046		8	191	94	59	52	29	6	ı	6	451		_	6	9	6	11	21	63
1975 Es		Amount	289	9,169	3,341	1,110	1,498	555	429	3,949	304	5,084	25,728		249	4,948	1,980	1,485	1,505	381	285	1	200	11,033		202	414	181	362	296	584	2,039
		Pos.	7	461	64	09	48	25	18	165	11	294	1,153		11	259	100	71	83	27	12	1	11	574		10	19	6	10	15	27	06
	Actual	Amount	168	8,399	3,207	1,002	1,426	910	344	2,632	293	4,564	22,945		242	4,333	1,778	1,246	1,326	274	238	108	174	9,719		181	317	175	422	396	800	2,291
	1974	Pos.	7	430	57	58	48	46	15	114	14	286	,075		11	248	94	09	54	24	12	9	6	518		∞	21	6	10	14	26	88
		Science	ant Secretary for Science	National Museum of Natural History	Astrophysical Observatory	Tropical Research Institute	Radiation Biology Laboratory	ograms	Chesapeake Bay Center	National Air and Space Museum	Center for the Study of Man	Park	Subtotal Science	History and Art	Ass't Secretary for History & Art	Museum of History and Technology	National Collection of Fine Arts	National Portrait Gallery	Hirshhorn Museum & Sculpture Garden	Freer Gallery of Art	Archives of American Art	Nat'l Armed Forces Museum Advis Bd	Cooper-Hewitt Museum	Subtotal History and Art	Public Service	Ass't Secretary for Public Service	Anacostia Neighborhood Museum	International Exchange Service	Division of Performing Arts	Office of Public Affairs	Smithsonian Institution Press	Subtotal Public Service
,	Page	No.	A-10	A-13	A-16	A-20	A-23	A-25	A-27	A-29	A-32	A-35			A-38	A-39	A-42	A-44	A-47	A-49	A-51		A-53			A-57	A-58	A-60	A-61	A-63	A-64	

Program	24	ı	32	238	I	1	10	-37	267	(400	1	180	I	ı	280		ı	14	46	ı	14	57	19	26	ı	1	775	38	1,349	2,338	6,192
Analysis of Increase Uncontrol- os. lable Progra	46	10	13	40	35	4	9	2	156	Ć	. v	4	1	9	1.	19		26	11	103	20	9	4	23	15	12	7	218	16	721	1,182	2,510
Analy Ul	1	1	2	4	1	1	1	1	7		ı	ı	ı	ı	ı	1		1	ı	2	1	_	2	1	2	1	ı	91	7	40	141	282
Estimate	1,005	212	909	1,868	1,007	96	191	767	5,752	L	4,250	193	260	626	450	5,785		779	331	871	658	197	170	828	502	504	222	6,539	628	o	23,351	79,408
1976 E	64	16	23	90	20	9	10	3	262	C	7	2	ı	11	1	15		29	11	36	33	∞	7	40	25	25	10	534	26	320	1,104	3,332
Total	935	202	561	1,590	972	92	175	- 1	5,329	t c	5,84/	189	80	620		5,186		753	306	722	638	177	109	816	461	492	215	5,546	574	0	19,831	70,706
Estimate Supple- mental	97	7	15	38	33	2	9	2	200	ć	70	4	1	9	I	30		29	11	19	23	_	2	24	19	13	∞	177	20	772	1,127	2,917
1975 E	838	195	546	1,552	939	90	169	- 1	5,129	1	128,5	185	80	614		5,156		724	. 295	703	615	170	104	792	442	479	207	5,369	554	8,250	18,704	67,789
Pos.	63	16	21	98	20	9	10	3	255	c	7 (7	ı	11	1	15		29	11	34	33	7	2	39	23	25	10	443	24	280	963	3,050
Actual Amount	494	231	319	1,165	096	72	157	- 1	4,282	[]	1,745	190	103	642	450	3,130		654	277	915	535	170	114	779	381	437	190	4,356	393	7,300	16,501	58,868
1974 Pos.	45	17	19	65	51	Ŋ	7	3	212	C	71 (∞	1	10	1	20		30	11	36	33	∞	5		18	23	11	400	20	335	296	2,880
Unit Drogram	Ass't Secretary for Museum Programs	Office of the Registrar	Conservation-Analytical Laboratory	Smithsonian Institution Libraries	Office of Exhibits Central	Traveling Exhibition Service	Smithsonian Archives	National Museum Act	Subtotal Museum Programs	Special Programs	American rev bicentennia rrugram	Environmental Sciences Program		Academic and Educational Programs	Research Awards Program	Subtotal Special Programs	Administrative & Support Activities	Office of the Secretary	Office of the General Counsel	Office of the Treasurer	Office of Personnel Administration	Office of Audits	Office of Equal Opportunity	Printing and Photographic Services ~	Information Systems Division	Office of Supply Services	Management Analysis Office	Office of Protection Services /	Facilities Planning & Eng Services	Office of Plant Services 🗸	Subtotal Admin & Support Act	Tota1
Page No.	A-65	A-67	A-68	A-70	A-72	A-73	A-75	A-76		7	A-79	A-82	A-85	A-84	A-86			A-87	A-88	A-89	A-91	A-92	A-93	A-95	A-96	A-98	A-99	A-100	A-102	A-103		



SMITHSONIAN INSTITUTION FY 1976 UNCONTROLLABLE INCREASES

The following additional funds are requested for costs that are beyond the control of the Smithsonian Institution. These increases result from law, from prevailing practices of wage setting, or from utility and shipping rate increases. A total of \$2,510,000 is required for the following increased costs.

NECESSARY PAY AND RELATED BENEFITS - An increase of \$1,873,000 is required for personnel compensation and personnel benefits for the projected higher costs in FY 1976 of FY 1975 staff. These increases accrue to employees because of: legislated pay raises and within-grade step increases; an additional paid work day; and Workmen's Compensation payments. These costs are calculated on a position-by-position analysis taking into consideration approved new hires in the current year and savings from promotions, turnover, and filling of vacancies at lower grades where possible. Absorption of these costs from currently available funds seriously hurts approved program activity. First, for every \$12,000 that goes to these costs from funds already in salaries and benefits, one man-year of employment is lost. Second, if other object class funds must be applied to these costs, productive employees are left without the supplies, tools, and equipment they need to do their jobs well. Since inflation in the costs of these materials already is taking its toll, pay cost absorption would be crippling. These additional costs are divided among the following:

- (1) Annualization of Legislated Pay Raises (\$827,000) The requested essential FY 1975 pay supplemental appropriation amounts to \$2,527,000. Necessary pay of \$827,000 is required to annualize funding in FY 1976. This includes funds for the following legislated General Schedule and Wage pay raises:
- --\$618,000 for the General Schedule pay raise effective on October 14, 1974 (E.O.11811, issued pursuant to P.L. 91-656) to cover the period of costs from July 1, 1975, through October 13, 1975. Over 2,300 employees are affected by this raise which was 5.5 percent over the previous pay scale. The full-year cost of this raise in FY 1976 is calculated at \$2,054,000. Necessary pay of \$618,000 is requested to annualize funding in FY 1976 for the period July 1, 1975-October 13, 1975. (Estimated total cost \$2,054,000 minus FY 1975 supplemental of \$1,436,000 = \$618,000.)
- --\$209,000 for several FY 1974-75 Washington, D. C. and other locale Wage pay raises. Prevailing practices call for the Wage pay scales in various geographical areas to be reviewed by a local Wage Fixing Authority to see how the wages paid by the U.S. Government compare to wages paid similar employees by the private sector in those geographic areas. In recent years, this comparison has been made at least yearly and several times more often. Some 623 Smithsonian Wage employees in Washington, D. C. received a 6 percent pay increase on October 27, 1974, granted under 5 U.S.C. 5341. Other Wage employees of the Institution, working in Maryland, Virginia, Arizona, New York, and the Panama Canal Zone, also received wage increases of various amounts at different times of the year. The proposed supplemental appropriation will meet the current year costs of these actions. The full-year cost of these raises in FY 1976 is estimated at \$1,300,000. Necessary pay funding of \$209,000 is sought to annualize funding in FY 1976 for the balances of the effective periods. (Estimated total cost \$1,300,000 minus FY 1975 supplemental of \$1,091,000 = \$209,000.)

The distribution of the requested FY 1975 pay supplemental appropriation by organization unit is shown on pages A-2 and A-3. Certain of these units also are requesting utility supplemental funds as explained on page A-6. Total Uncontrollable Increases are included on pages A-2 and A-3.

A-5

(2) Step Increases (\$801,000) - Necessary pay funding of \$801,000 is required in FY 1976 for General Schedule and Wage within-grade and periodic step increases. For GS employees, such increases are required by P.L. 88-426, the Government Employees Salary Reform Act of 1964. Wage employees are covered by law and prevailing practices. Such increases must be granted if employees are performing at acceptable levels of competence. The requested increase will fund the annualization of such increases granted in FY 1975 and part-year cost of new increases granted in FY 1976. Calculated on an individual position basis, in FY 1975 it is estimated that 1,776 employees will be granted periodic steps. In FY 1976 the Institution will have to annualize these costs (\$420,000) and fund the costs of 1,888 new periodic steps (\$381,000). Offsets have been made to the requested increase for turnover and promotions.

The General Schedule portion of this request amounts to \$608,000. There are over 2,300 General Schedule positions with 1,485 scheduled to receive a new within-grade in FY 1976. The Wage portion of this request is \$193,000. There are approximately 750 employees in Wage positions, of whom 403 will receive new within-grades in FY 1976.

- (3) Extra Day (\$160,000) The annual pay scale in effect in the Federal government is based on 260 paid days. FY 1976 will have 262 paid work days. Since funds are already in the base for one additional work day in FY 1975, the request is for funding for one more day.
- (4) Workmen's Compensation (\$85,000) Section 8147(b) of Title 5, United States Code, provides for payments to be made to employees for injuries and to their families in case of death. These payments are determined and made by the U.S. Department of Labor's Office of Workers' Compensation Programs. Each August, the Department of Labor bills agencies the cost incurred by their employees for the previous fiscal year. These bills are payable the next July. The Institution has placed emphasis on a safety program. One of the functions of the Office of Protection Services is to make and enforce safety regulations in the Institution. Even though various prevention activities have taken place, with the increase in employees the number of cases in FY 1974 increased to 78 as compared to 66 in FY 1973. The bill for FY 1974 (payable in FY 1976) is \$182,773. With the \$98,000 that is in the base for FY 1975, an additional \$85,000 is needed to finance this bill.

The distribution of the FY 1976 Necessary Pay components by organization units is shown on page A-8.

UTILITY RATE INCREASES - An FY 1975 supplemental appropriation of \$390,000 is requested to help cope with dramatic increases in the costs of steam for heating (supplied primarily by the General Services Administration) and electricity purchased from the Potomac Electric Power Company and similar companies in other locales of Smithsonian operations. These cost increases in FY 1975 are attributed almost entirely to substantial rate hikes, not increased usage. Energy conservation and mild winter weather in 1973-1974 and so far in 1974-1975 have helped to hold down costs. Even so, significant cost absorption will be required in FY 1975 despite the supplemental—if appropriated. This cost absorption will force the deferral to FY 1976 of essential supply replenishment, the replacement of worn-out equipment, and necessary plant maintenance. Since Smithsonian consumers of utilities may have to assist in funding their costs this year, the Institution's capability for pay cost funding is further limited.

The table on page A-9 shows the Smithsonian's Office of Plant Services expenses. This office funds utility services for buildings on and near the Mall. These figures are closely representative, however, of the similar funding problems being faced by those Institution bureaus outside of this geographical area, which budget for their own utility services. This table shows that while projected FY 1975 use of steam will increase only about 6 percent over FY 1973, costs will be up almost 87 percent. Similarly, electricity use is up about 13 percent over the same period, but costs are well over 100 percent more.

The \$390,000 will be distributed as follows:

Office of Plant Services	\$363,000
National Zoological Park	17,000
Other units	_10,000
	\$390,000

These amounts are included in the FY 1975 supplemental column pages A-2 and A-3.

For FY 1976, an additional \$617,000 is requested to close the gap between current funding and the costs of current use and to help meet new rate increases. This amount by organization unit is shown on the "Other Uncontrollable" line in the FY 1976 justifications for those bureaus and offices affected. Other than certain new requirements separately justified, for the new National Air and Space Museum and National Zoological Park building spaces, the FY 1976 budget does not provide for increased use. Strict energy conservation measures will be continued.

SHIPPING RATE INCREASES - An amount of \$20,000 is requested to help meet shipping rate increases. The International Exchange Service is the official exchange bureau in the United States for international exchange of literary, scientific, and cultural publications. In addition, 14 Stat. 573, as amended, provides that the exchange of the United States Government publications shall be made through the Smithsonian. The major cost to this program, besides salaries, is shipping charges. Shipping rates have gone up drastically for ocean freight and shipping to the docks. Comparing the first six months of FY 1974 and 1975 shows that the cost per pound of such shipping has increased about 25 percent.

July-December	Pounds Shipped	Cost	Cost Per Pound
FY 1974	246,313	\$26,800	\$0.11
FY 1975	225,967	30,700	0.14

While improved packing methods helped to offset rate increases in prior years, additional funds are now needed to avoid curtailing the exchange of important publications.

Necessary Pay FY 1976 (Dollars in Thousands)

Unit	Within Grades	Annual GS Raise	Annual Wage Raises	Extra Day	Total
Assistant Secretary for Science	2	4		1	7
National Museum of Natural History	114	115	11	27	267
Smithsonian Astrophysical Observatory	16	20	3	6	45
Smithsonian Tropical Research Institute	20	10	6	3	39
Radiation Biology Laboratory	13	7	4	3	27
Internat'l & Environmental Programs	7	6		2	15
Chesapeake Bay Center	4	9		1	14
National Air and Space Museum	30	36	1	6	73
Center for the Study of Man	3	10		1	14
National Zoological Park	75	29	58	14	176
Assistant Secretary for History and Art	6	3		1	10
National Museum of History & Technology	63	44	17	12	136
National Collection of Fine Arts	25	35	5	4	69
National Portrait Gallery	17	14	5	2	38
Hirshhorn Museum and Sculpture Garden	18	19	4	3	44
	7	6	1	1	15
Freer Gallery of Art	1		1	1	5
Archives of American Art	_	3		_	4
Cooper-Hewitt Museum	2	1		1	-
Assistant Secretary for Public Service	2	3		1	6
Anacostia Neighborhood Museum	6	4		1	11
International Exchange Service	2	2		1	5
Division of Performing Arts	3	4		1	8
Office of Public Affairs	4	5		1	10
Smithsonian Institution Press	7	8		1	16
Assistant Secretary for Museum Programs	14	3	27	2	46
Conservation-Analytical Laboratory	6	6		1	13
Office of Exhibits Central	13	19		3	35
Office of the Registrar	5	4		1	10
Smithsonian Institution Libraries	21	15		4	40
Smithsonian Traveling Exhibition Service.	2	1		1	4
National Museum Act	1	1		1	2
Smithsonian Archives	3	2		1	6
	1	8		1	9
American Revolution Bicentennial Program.	1	3			4
Environmental Sciences Program	3	3			6
Academic and Educational Programs				7	26
Office of the Secretary	11	12		3	
Office of the General Counsel	7	3		1	11
Office of the Treasurer	10	7		1	18
Office of Personnel Administration	9	9		2	20
Office of Audits	2	3		1	6
Office of Equal Opportunity	1	2		1	4
Office of Printing and Photo Services	11	8	2	2	23
Information Systems Division	6	8		1	15
Office of Supply Services	6	5		1	12
Management Analysis Office	3	3		1	7
Office of Protection Services	120	78	1	19	218
Facilities Planning & Eng. Services	6	8		2	16
Office of Plant Services	92	11	64	16	183
Total	801	618	209	160	1788*
10181	001	010	209	100	1/00

^{*} Excludes the Workmen's Compensation payment of \$85 which is not charged to bureaus. The bill is paid by the Office of the Treasurer. Total request for Necessary Pay is \$1,873.

Use-Millions of KWH for electricity and lbs. of steam Rate in dollars (per KWH and per thousand lbs. of steam) Cost in thousands of dollars

OFFICE OF PLANT SERVICES 1/

Use and Costs of Steam and Electricity

	Deficit (\$000s)	\$306	525	\$83,26/
Estimate	Budget (\$000s)	006\$	1,400	\$2,3005/
Y 1975 - 1976	Average Cost Budget Rate(\$) (\$000s) (\$000s)	$\frac{4}{51}$ \$1,206	1,925	\$3,131
Ħ	Aver Use Rate	$261.6\frac{3}{2}$ \$4.61	$64.1\frac{3}{4}$ 0.03+	
al	Average Cost Rate (\$) (\$000s)	\$650	1,183	\$1,833
1974 Actu	Average Rate (\$)	\$2.96	2/ 0.022+	
- 1	ΞÏ	$219.6^{2/}$	53.32	
al	Cost (\$000s)	\$646	912	\$1,558
1973 Actu	Average Cost Use Rate (\$) (\$000s)	247.4 \$2.61		
FY	Use	247.4	56.5	
	Utility	GSA steam for heating	PEPCO Electricity 56.5 0.016+	Total Costs

- resulting largely from rate hikes are closely representative, however, of similar experience of Institution activities Cost increases Funds steam and electricity for Smithsonian museums, galleries, and other space on and near the Mall. outside of this geographical area who must fund their own utilities. 1
- Reduction from FY 1973 reflects primarily an unusually mild winter with some contribution from energy conservation measures 5
- Increase reflects anticipated more normal winter temperatures than FY 1974 and operations of Hirshhorn Museum and Sculpture Garden. 3/
- Rate announced by GSA in November 1974 but retroactive to July 1, 1974 without notice. 4
- Office of Plant Services started FY 1975 with budget of about \$2,100,000 as compared with FY 1974 actual of \$1,800,000. Note that FY 1976 costs are estimated to Additional \$200,000 reflects further absorption effort to meet needs. \$1,300,000 over FY 1974 actual. 2
- This deficit in FY 1976 will be met by this office's share of the FY 1975 supplemental (\$363,000) continuing in the base plus essential supply replenishment, replacement of worn-out equipment, and necessary plant maintenance and other program needs. its share of the FY 1976 Uncontrollable amount (\$538,000). Total funding of \$901,000 by these actions allows for token contribution to new rate increases. FY 1976 use and cost figures do not include new National Air and Space Museum building This shortfall of funding to be met in FY 1975 by the requested supplemental (if appropriated) and by deferring to FY 1976 presented separately. The budget request for this building is for comparability. 9

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

1974 Actual......\$168,000 1975 Estimate.....\$294,000 1976 Estimate.....\$338,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	7	0	7
11 Personnel Compensation	138	25	163
12 Personnel Benefits	12	2	14
21 Travel & Trans. of Persons	16	5	21
22 Transportation of Things	4	2	6
25 Other Services	87		87
26 Supplies and Materials	17	5	22
31 Equipment	20	5	25
TOTAL	294	44	338
Analysis of Increase			
Necessary Pay		7	
Program Funds		37	

ABSTRACT - This office is responsible for overall planning, coordinating, and reviewing the progress of the thirteen science bureaus and programs within the Institution. The International Environmental Program is administered from this office. A program increase is being sought for this office in the amount of \$37,000. Necessary pay in the amount of \$7,000 is being sought for existing staff.

PROGRAM - I. Immediate Office of the Assistant Secretary for Science with 7 positions and \$208,000 advises and assists the Secretary in planning, implementing, and reviewing the progress of Smithsonian science programs. The Bureaus reporting to the Assistant Secretary for Science are the National Museum of Natural History, the Radiation Biology Laboratory, the Tropical Research Institute, the National Zoological Park, the National Air and Space Museum, the Astrophysical Observatory, the Office of International and Environmental Programs, the Chesapeake Bay Center for Environmental Studies, the Center for the Study of Man, the Science Information Exchange, and the Fort Pierce Bureau. This office is also responsible for the administration of the Research Awards, the Environmental Sciences, and the International Environmental Program.

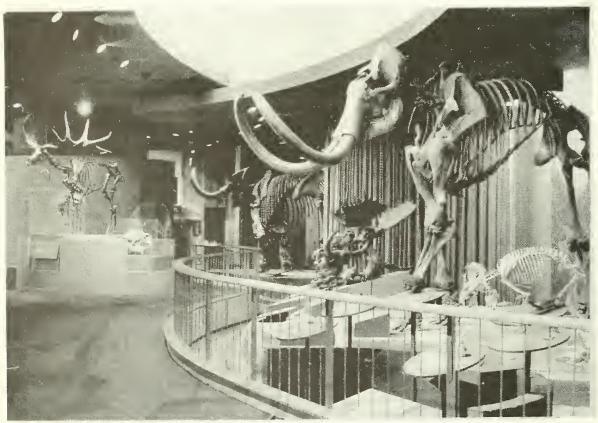
II. International Environmental Program (IEP) - With \$130,000 transferred from the Office of International and Environmental Programs, the Office of the Assistant Secretary for Science administers the International Environmental Program. IEP is an interbureau, interdisciplinary effort aimed at studying various ecosystems in the tropics and subtropics. Each project is designed to be long-term (between 5 and 15 years) so that a sufficient body of all-important phenological and systematic data can be accumulated and at the same time the host nation can prepare to take over full responsibility for the project's management. Special attention is given to studying endangered species and their habitats. Nationals of the country where the research is being carried out are being involved to the fullest extent possible and every effort will be made to translate results as soon as possible into applications for the effective conservation and management of the ecosystem being studied.

The major sites chosen for work are (1) the marine ecosystem of the Galapagos Islands, Ecuador, (2) the Fly River region of Papua, New Guinea, (3) the Amazonian region surrounding Manaus, Brazil, (4) savanna and forest sites south of Maracay, Venezuela, and (5) Chitawan National Park in the Terai of Nepal. Field staff will be predominately

Smithsonian researchers from the National Museum of Natural History, the National Zoological Park and the Smithsonian Tropical Research Institute in Panama. In addition to the foreign nationals already involved, an increasing number of scientists from American universities and other research organizations are expected to participate.

JUSTIFICATION OF \$37,000 INCREASE (Research) - Term scientists (appointments limited from one to three years) as well as Smithsonian scientists will be used to pursue the studies at the various locations chosen for the International Environmental Program. Funds are requested to support this important interbureau, interdisciplinary research. An increase of \$37,000 is requested for this program.





The new approach in exhibits production at the National Museum of Natural History is exemplified by the Discovery Room, (Top) an area in which visitors may handle exhibits and collections, and "Ice Age Mammals and the Emergence of Man," (Bottom) a panorama of free standing ice age mammals.

NATIONAL MUSEUM OF NATURAL HISTORY

1974 Actual......\$ 8,399,000 1975 Estimate.....\$ 9,503,000 1976 Estimate.....\$10,030,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	461	19	480
11 Personnel Compensation	7,423	439	7,862
12 Personnel Benefits	639	37	676
21 Travel & Trans. of Persons	103	2	105
22 Transportation of Things	21		21
23 Rent, Comm. & Utilities	23		23
24 Printing and Reproduction	182		182
25 Other Services	703	19	722
26 Supplies and Materials	132	9	141
31 Equipment	277	21	298
TOTAL	9,503	527	10,030
Analysis of Increase			
Necessary Pay		267	
Program Funds		260	

ABSTRACT - The National Museum of Natural History (NMNH) serves as a center for the natural sciences. It maintains large reference collections and conducts programs of identification and documentation, research, collections management, exhibits, and education--including collaborative projects with universities and other institutions of learning. An increase of 19 positions and \$260,000 is requested for FY 1976 to meet the following support requirements: (1) Collections Management - 11 museum technicians (\$110,000) to provide additional assistance for the care of the collections which grow at a substantial rate and are utilized increasingly each year; (2) Exhibitions - 3 exhibits technicians (\$64,000) and additional funding of \$36,000 to provide for the phased modernization of exhibit halls to enhance their educational value; and (3) Buildings and Facilities Management - 2 laborers and 3 janitors (\$50,000) to provide more adequate building labor and cleaning services. An additional amount of \$267,000 is sought for necessary pay.

PROGRAM - This Museum serves as a national and international center for the natural sciences. It maintains the largest reference collections in the nation (over 60 million objects) and has the legal responsibility (20 U.S.C. 59) to serve as the ultimate Federal repository of all collections and objects of natural history, archeology, and ethnology made by agencies of the government when no longer needed by those agencies for investigations in progress. Additionally, the NMNH is the repository for numerous extremely valuable collections obtained from other sources, such as the scientific community and academic institutions, as well as many private individuals.

The scientists at the Museum conduct a broad program of basic research on man, plants, animals, fossil organisms, rocks, minerals, sediments, and materials from outer space. Their fundamental studies in systematics and biology are providing new information required for the solution of major problems of conservation, pollution, food production, improvement of medical knowledge, and for planning national and international programs leading to predictive ecology and environmental management. Scientific and technical results which flow from this scientific research are made available to others by an active and large publications program. Additionally, the Oceanographic

Sorting Center in Washington, D.C., recently reassigned to the Museum, prepares and distributes animal and plant materials to scientists from 200 agencies around the world who are concerned with marine pollution, ocean dumping, pollution monitoring, environmental prediction, and systematics studies.

Over three million people visit the Museum each year, including many thousands of school children attracted by the exhibits. A major program of exhibit improvement began in FY 1974 with the creation of the new exhibit, "Ice Age Mammals and the Emergence of Man", and the very successful Discovery Room, an area in which visitors may handle exhibits and collections. In FY 1975 major exhibits effort is being directed to the preparation of the Bicentennial exhibit "Our Changing Land" and to a new hall of ecological archeology dealing with South America titled "A Continent and its Cultures." As a part of its education program, the Museum provides assistance for elementary and secondary school groups. In addition, many members of the scientific staff participate in joint educational programs with universities by teaching courses, training graduate students, and conducting science seminars. The Museum also provides leadership in the improvement of museum techniques and collections management, especially through the application of computer technology. The cafeteria, Museum Shop, and classroom facilities now under construction in the Museum's West Courtyard with non-appropriated funds will provide major new public service opportunities.

JUSTIFICATION OF \$260,000 INCREASE:

Collections Management - Beginning in FY 1972 the Museum undertook a long-range program designed to correct the inefficient operations resulting from the shortage of support personnel and meager operating funds available to the scientific staff. With the support of the Office of Management and Budget and the Congress significant improvements have been made but the current status is still far short of the original objective of an average of 3 support personnel for each NMNH scientist. For the past 3 years an interim target ratio of 2 to 1 has been set. Increased funding (\$110,000) for 11 museum technicians requested in this budget will achieve a ratio of 1.80 to 1.00 bringing the Museum closer to this interim goal (see table). These additional technicians will provide laboratory and research assistance to NMNH scientists such as cleaning and collecting specimens, preparing thin sections, and dissecting animals, thereby improving the efficiency and productivity of the scientific staff. In addition, the new employees would be used to help care for the rapidly growing collections at the Museum. Real damage and loss is occurring to valuable specimens because of slowly evaporating preservative fluids, crumbling labels, and deteriorating containers. Care of these collections is of the utmost importance in order that they may be preserved for study and exhibit purposes.

Ratios of Man-Years of Effort Between Support and Professionals /1

Fiscal Year	Support Staff	Scientists	Ratio
1974 actual	175	111	1.58:1.00
1975 estimate	189	111	1.70:1.00
1976 estimate	200	111	1.80:1.00

Atios apply only to personnel assigned directly to science support. They exclude personnel in ADP applications, exhibits, education, and the director's office. The table also excludes Sorting Center personnel for whom data are unavailable prior to FY 1975.

Exhibitions - The Museum has planned a long-range exhibits program aimed at developing a better understanding of man's relationships to and dependence upon all other life. Most exhibits in the Museum are presently organized by scientific

disciplines and thus fail to establish properly the interrelationships between man, animals, plants, and the inorganic world. The plan to redesign and refurbish the more than 30 exhibit halls, integrating the scientific content of the halls in accordance with modern scientific practices, is projected to extend over a period of 20 years. This anticipates a design and production period of 1 1/2 to 2 years per exhibit and completion of 1 1/2 major halls a year.

During the first two years, work on the following new exhibits is planned: a hall of lunar geology which will illustrate man's new understanding of the geology of the moon, as exemplified by the rock and soil samples returned in the Apollo Program; a hall featuring living insects which will illustrate their interrelationship with animals and plants and their interactions with man; an exhibit examining origins of western civilization, focusing upon the domestication of animals and plants and the development of metallurgy in Asia Minor; and finally, an exhibit which examines the processes of organic change in the living world.

Using past experience as a guide, most halls should cost in the range of \$350,000 to \$450,000. The present exhibits base of about \$500,000, insufficient to meet anticipated costs of the new program, must also be used, in part, to continue general maintenance and upgrading of existing exhibits. An additional \$100,000 and 3 exhibits technicians are requested to create a sufficient level of funding in the base for this long-range exhibits program.

Buildings and Facilities Management - In FY 1976, the Bicentennial year, the National Museum of Natural History expects an approximate doubling in its number of visitors. An increase to 6 million visitors per year will place an exceedingly heavy burden on an already understaffed building management force. A study determined that the force should include a minimum of 78 positions to provide adequate service for public and employee use of the building. Even with increased resources in FY 1975, the buildings management staff will not exceed 61. The requested sum of \$50,000 will be used to employ 5 additional custodial personnel and purchase necessary supplies and materials to improve this situation and to provide cleaner and better maintained facilities for visitors and employees.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

1974 Actual......\$3,207,000 1975 Estimate.....\$3,402,000 1976 Estimate.....\$3,716,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	64	5	69
11 Personnel Compensation	1,682	133	1,815
12 Personnel Benefits	145	12	157
21 Travel & Trans. of Persons	71		71
22 Transportation of Things	55		55
23 Rent, Comm. & Utilities	286		286
24 Printing and Reproduction	21		21
25 Other Services	311	69	380
26 Supplies and Materials	95	15	110
31 Equipment	229	85	314
32 Lands and Structures	507		507
TOTAL	3,402	314	3,716
Analysis of Increase			
Necessary Pay		45	
Program Funds		269	
Program Funds		269	

ABSTRACT - The goal of the Smithsonian Astrophysical Observatory (SAO) is to increase and diffuse knowledge about the Earth and the astronomical universe. Heavy emphasis is placed on both observational and theoretical research in astronomy, based on the principles of physics and chemistry. In addition to its headquarters and laboratories at Cambridge, Massachusetts, SAO facilities include a multi-purpose observatory at Mt. Hopkins, Arizona; a world-wide network of associated field stations which observe artificial satellites and comets; and a network of automatic stations in the midwestern United States which photograph meteors.

An increase of 5 positions and \$269,000 is requested for FY 1976 to meet scientific program needs and to provide general administrative and support services. Specifically: (1) Research - \$125,000 for laboratories and \$44,000 for the visiting scientist and postdoctoral programs; and (2) General Administration - 5 positions and \$100,000 for field, personnel, payroll, and property management purposes are requested. An additional \$45,000 is sought for necessary pay.

PROGRAM - Two scientific problems drive the research program at SAO. One is the evolution of matter, starting with the explosive beginnings of the universe 20 billion years ago. After the formation of galaxies and stars, some matter collapses into unusual objects, like quasars, neutron stars, and black holes. The extreme physical conditions found in these objects test fundamental principles of physics, including Einstein's Theory of Relativity and modern theories of elementary particles. By studying the evolution of stars and galaxies, SAO contributes to basic physical theory.

The other problem concerns cosmic matter that has cooled to the point that molecules and solid particles form. The condensation of materials accompanying the formation of a star like the Sun results in the formation of planets and, ultimately, in the emergence of life. By studying the Earth, the solar system, and cool matter in space, SAO contributes to an understanding of the processes leading to the origin of life in the universe.

Progress toward the solution of these problems is achieved by a variety of different approaches. Study of matter under extreme conditions can be approached through high-energy astrophysics, optical and infrared astronomy, and solar and stellar physics, while the study of molecules and solid particles can be approached through optical and infrared astronomy, radio astronomy, planetary sciences, and geoastronomy. Atomic, molecular, and radiation physics, as well as theoretical astrophysics, underlie both approaches. Each approach requires specific research tools. For example, high-energy astrophysics is based on obervations made by rocket, balloon, and satellite-borne telescopes to detect x-rays and gamma rays from space, while atomic, molecular, and radiation physics are studied by using ground-based laboratories and computers. In addition to its headquarters and laboratories at Cambridge, Massachusetts, SAO facilities include a multi-purpose observatory at Mt. Hopkins, Arizona; a world-wide network of associated field stations which observe artificial satellites and comets; and a network of automatic stations in the midwestern United States which photograph meteors.

The Observatory is now completing its second year of operation as a partner, together with the Harvard College Observatory, in the Center for Astrophysics. The Center comprises a number of research divisions, which emphasize the different approaches described above. The Center has conducted a study of its operations in FY 1974 and is pursuing a development plan for the five years 1975 to 1979. The budget request is based on that plan. The Center's plan emphasizes an increase in the collaboration between Harvard and Smithsonian, which in the past has enhanced the effectiveness of SAO by bringing talented students and young scientists from physics, astronomy, chemistry, and geology into the research program.

The plan requires that specific objectives be met - i.e., the development of laboratories and research capabilities that meet critical deficiencies in the current program. In each case, the objective is to provide a resource, either in instruments or in personnel, that will increase the effectiveness of research efforts already underway by filling an important gap. A number of programs that have achieved their objectives are being phased out in order to free additional resources toward this end.

While it is impossible to predict beforehand the specific results of research, one can plan the programs (including manpower, equipment, and operations) necessary to give significant scientific results and, through the conduct of periodic reviews, determine the effectiveness of the Observatory's programs and operations. SAO has adopted the establishment and operation of these programs as its management objectives.

In the course of this review, a number of programs have been phased out, in order to provide additional resources to higher priority programs. However, some of the resources released by this action have been required to cover increased costs in rent, utilities, and communications.

JUSTIFICATION CF \$269,000 INCREASE (Research and General Administration):

High Energy Laboratory - As a fundamental part of its objective of maintaining a nationally significant program in high energy astrophysics to permit studies of matter under extreme conditions in the cosmos, it is essential that SAO establish a laboratory for the conduct of experimental research in high energy astrophysics. Although x-ray astronomy is based on space-borne telescopes, a laboratory is critically needed to facilitate the development, testing, and calibration of instruments for rocket and satellite missions. The laboratory will also be used to conduct research on critical materials and for the development of x-ray detectors. Funds (\$80,000) sought in FY 1976 will permit the design, development, and construction of the x-ray source; the design and development of x-ray detectors; and the design and evaluation of a 70-foot long vacuum pipe.

Optical and Infrared Laboratory - SAO must expand its laboratory capabilities in support of its two major goals in optical and infrared astronomy. SAO, in collaboration with the University of Arizona, is developing a unique facility in the large multimirror telescope (MMT) and has demonstrated a strong capability to utilize a balloon-borne infrared telescope in collaboration with Harvard University and the University of Arizona. These telescopes as well as SAO's existing ground-based instruments require the continuing development of new detectors and instrumentation in order to realize their full scientific potential. Funds (\$45,000) sought will be used for electronic and optical equipment required in the assembly and testing of optical and infrared instruments.

Visiting Scientist and Postdoctoral Programs - In order to strengthen the scientific programs at SAO and, at the same time, to increase the availability to the entire scientific community of the specialized facilities of the Observatory, a program of visiting scientists and postdoctoral fellows is being developed in cooperation with Harvard College Observatory (HCO). Participants are chosen on the basis of their scientific excellence, their ability to utilize the Center's resources, and their contribution to its objectives. Out of more than 250 postdoctoral candidates, the Center was able to support 6 (4 by HCO and 2 by SAO). Ultimately, the Center will have about 6 visiting scientists and 12 postdoctoral fellows at one time, supported equally by HCO and SAO. In FY 1976, \$44,000 is requested to support 2 additional postdoctoral fellows and 1 or 2 visiting scientists, depending on the length of their stay at the Center.

General Administrative and Support Services - In FY 1975, the first step was taken to correct the imbalance that has developed over the past several years between SAO's Federally funded and grant and contract funded general administrative and support activities. About \$100,000 were approved for this purpose. This was approximately half the amount requested and is far short of what is needed to correct the imbalance and thus provide adequate administrative and support personnel for Federally funded research programs. In total, approximately 25 positions and \$500,000 are required. As a further step towards solving this problem, 5 additional positions and \$100,000 are requested in FY 1976. Trained and capable administrative and support personnel, now supported by grant and contract funding, will be hired to fill these positions. These positions include: 2 positions and \$52,000 for facilities management at the Mt. Hopkins Observatory (a field manager and a support supervisor); and 3 positions and \$48,000 for general administration, which include a personnel assistant, payroll administrator, and property administrator.

Highlights of SAO Research Results

FY 1974

- --Publication of <u>Blanketed Model Atmospheres</u> for <u>Early Type Stars</u>, a companion volume to the previously published <u>Celescope Catalog</u>, representing an analysis of the Celescope data as applied to stellar theory.
- --Publication of 1973 Smithsonian Standard Earth (III), the latest calculation of the earth's shape and size with respect to gravitational variation and a uniform network of geodetic postions.
- -- The first identification of a probable "black hole" in the constellation Cygnus.
- --Detection by means of radio observations of the basic organic hydrocarbon radical, methylidyne, in the tail of Comet Kohoutek. (Jointly discovered with astronomers from the Harvard College Observatory who were supported in part by the National Science Foundation.)

- --Development of two separate but related theories concerning the creation and evolution of the moon which involves the probable breakup, capture, and later recombination of the primoridal lunar body by the earth.
- --Recognition and description of the peculiar orbital properties of the Mariner 10 spacecraft which allowed a second fly-by mission to the planet Mercury.

FY 1975

- --First publication of major results from the ultraviolet and x-ray experiments aboard Skylab by Harvard and Smithsonian scientists revealing, among other new findings, the presence of coronal holes.
- --Discovery of a second probable "black hole" in the constellation Circinus.
- --Discovery by means of radio observations of molecular ethanol in interstellar space. (Jointly discovered with astronomy groups at the University of Maryland, National Radio Astronomy Observatory, National Bureau of Standards, in Australia, and at the University of Chicago. The SAO effort was cooperative with Harvard College Observatory astronomers supported in part by the National Science Foundation.)
- --Completion of the telescope mount for the Multiple Mirror Telescope.
- --Co-sponsorship of International Astronomical Union Colloquium 26: "On Reference Coordinate Systems for Earth Dynamics", Torun, Poland, which attracted more than 100 scientists from 20 countries.
- --Flight aboard a joint American-Dutch satellite of an x-ray experiment designed to map and study x-ray sources.
- --Confirmation, through precise orbital determinations, that a newly discovered object near Jupiter is actually the 13th Jovian satellite.
- --Discovery of a second celestial source of high-energy gamma rays in the constellation of Centaurus.
- --Development of a new theory of the molecules observed in comets, based on rapid chemical reactions.
- -- Begin construction of the MMT telescope shelter atop Mt. Hopkins.

FY 1976 (Expected)

- --Flight of a rocket probe experiment to test the equivalence principle of Einstein's Theory of Relativity.
- --Flight of a spacecraft-to-spacecraft doppler tracking experiment aboard the Apollo-Soyuz space mission that is intended to study small-scale structures in the earth's gravitational field.
- --Begin installation of the MMT telescope atop Mt. Hopkins, Arizona.
- --Preparation of the x-ray experiments designed to fly aboard the High Energy Astronomy Observatory satellite series.
- --Participation by the Smithsonian's world-wide satellite tracking network in NASA's Earth and Ocean Applications Program.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

1974 Actual......\$1,002,000 1975 Estimate.....\$1,181,000 1976 Estimate.....\$1,332,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	60	4	64
11 Personnel Compensation	835	90	925
12 Personnel Benefits	112	16	128
21 Travel & Trans. of Persons	35	12	47
22 Transportation of Things	6	2	8
23 Rent, Comm. & Utilities	36	12	48
24 Printing and Reproduction	1	2	3
25 Other Services	85	1	86
26 Supplies and Materials	49	16	65
31 Equipment	22		22
TOTAL	1,181	151	1,332
Analysis of Increase			
Necessary Pay		39	
Other Uncontrollable		7	
Program Funds		105	

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) conducts advanced studies in ecology, behavior, and evolution of tropical organisms and manages related programs in the areas of education and conservation. The tropics contain the greatest diversity of life on this planet; as such they offer the biologist the best natural laboratory for studying the interrelationships of life on earth. Panama further offers its unique zoogeographic characteristics--a landbridge between the terrestrial life forms of the two continents and a barrier to the marine life of two oceans.

In FY 1976, four additional positions and increased funding of \$105,000 are sought to meet the following requirements: (1) Research - a resident naturalist (\$21,000) to be responsible for environmental monitoring and coordination of scientific activity on Barro Colorado Island; two positions, a biochemical population geneticist and a laboratory technician (\$40,000) to continue the gradual development of the Institute as a primary center for tropical studies; and funds in the amount of \$14,000 to fund increased support and travel expenses and (2) Buildings and Facilities Management - a janitor/guard position (\$7,000) and an additional \$23,000 to provide maintenance and protection for the newly occupied Tivoli building, fund associated moving costs, and cover inflationary cost increases. An additional requirement of \$39,000 for necessary pay costs and \$7,000 for utility costs is requested in the Uncontrollable Section.

PROGRAM - The Institute provides a base of operations and an intellectual center for advanced basic studies of ecology, behavior, and evolution in the tropics. Because of the diversity of tropical organisms and the complexity of their relationships, the tropics represent one of the most interesting but poorly understood biological regions of the world. Many of the developing nations and those with the most rapidly growing populations are within the tropics, and it is here that major environmental changes are likely to occur during the next decade. Understanding and properly managing tropical environments is essential to their preservation as well as the protection of living systems elsewhere in the world. For example, the destruction of suitable winter feeding sites in Central and South America will result in the extinction of migratory birds even if their summer breeding habitats are preserved in the United States.

STRI's research stations in Panama provide immediate access to tropical, terrestrial and marine environments. These include almost 9,000 acres of forest reserve on Barro Colorado Island and the adjacent peninsulas in Gatun Lake and a two-ocean marine research capability with laboratories on the coral reef and lagoon at Galeta Point on the Atlantic Coast, and the rocky reefs at Naos Island on the Pacific Coast. A small facility in Cali, Colombia provides access to high forest plateau in the Andes. The Institute's permanent scientific staff, as well as many visiting scientists and students, conduct research in these areas as well as in other parts of Central and South America, the Pacific, Asia, and Africa, where comparative studies are clarifying the distinctive ecological relationships of the tropics.

During FY 1975 the permanent scientific staff of STRI is 14, there are 10 long-term pre- and post-doctoral students associated with STRI, and it is anticipated that the facilities will be used for shorter periods by a total of 700 visitors from all over the world. In FY 1974, 70 seminars were held and 65 scientific papers were published in the world's leading scientific journals by staff and associates. In FY 1975 a number of books will be completed and published by the STRI staff including a volume on the ecology and archaeology of the central provinces of Panama and a critical volume on the behavior of new world primates.

One of the most important responsibilities of the Institute is the support of advanced training in tropical biology. Organized teaching efforts extend beyond graduate and post-doctoral training to college and secondary schools. In addition, informal training and docent-guided tours are also offered for the general public.

JUSTIFICATION OF \$105,000 INCREASE:

Research - Barro Colorado Island, which is both an integral part of the Institution's Environmental Science Program and a research station used by hundreds of visiting scientists, is in need of day-to-day coordination of the scientific activities of the visiting and staff scientists. It is particularly important that someone be available to provide continuity to the research of visiting scientists. An amount of \$21,000 is requested to hire a resident naturalist who will be responsible for environmental monitoring as well as the coordination of scientific activity.

One of the problems related to the study of tropical organisms is that of sorting out the differences in closely related populations and species. The subtleties of tropical adaptations are often difficult to resolve with classical techniques of analyzing form and structure. In recent years techniques have been developed which enable biologists to analyze enzyme forms and structures and, consequently, detect subtle differences and responses in seemingly identical populations. While much research has been done on temperate organisms, there is little data on which to evaluate or compare responses of tropical organisms. An amount of \$40,000 is requested to hire a biochemical population geneticist to conduct research in this area and a laboratory technician to analyze biological material and collect data for interpretation. Support funds of \$2,000 for supplies and equipment also are requested.

The need for increased travel funds has intensified in the past year as a result of expanding research efforts and inflation. While Panama is the facilities and administrative base of the Institute, the research of most of the scientific staff is comparative, requiring field work in many places of the New World and Old World tropics. In addition, there are travel costs associated with various scientific meetings and conferences and lectures conducted by STRI scientists at U. S. universities. These trips have the dual benefits of keeping the scientists informed of new developments in their fields and of promoting interest in tropical research. An increase of \$12,000 is requested to meet these travel expenses.

Buildings and Facilities Management - In FY 1976 renovation of the Tivoli building will be completed with funds requested in the Restoration and Renovation of Buildings account. Upon the relocation of administrative and support personnel to the building, the requirement for maintenance and protection will increase. Funds are requested to hire a janitor/guard (\$7,000) and to finance moving costs and purchase necessary maintenance supplies (\$9,000).

STRI buys more than one third of its supplies and equipment in the Republic of Panama. The wholesale price index for the Republic of Panama rose 31.5 percent in the latest quarter; the rise for the same period in the United States was 19.7 percent. An amount of \$14,000 is requested to cover approximately half of STRI's inflationary costs other than utilities.

RADIATION BIOLOGY LABORATORY

1974 Actual......\$1,426,000 1975 Estimate.....\$1,542,000 1976 Estimate.....\$1,631,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	48	0	48
11 Personnel Compensation	744	25	769
12 Personnel Benefits	61	2	63
21 Travel & Trans. of Persons	11	4	15
22 Transportation of Things	6	2	8
23 Rent. Comm. & Utilities	434	28	462
24 Printing and Reproduction	13	3	16
25 Other Services	35	10	45
26 Supplies and Materials	86	10	96
31 Equipment	152	5	157
TOTAL	1,542	89	1,631
Analysis of Increase			
Necessary Pay		27	
Other Uncontrollable		28	
Program Funds		34	

ABSTRACT - The Radiation Biology Laboratory (RBL) studies the influences of environmental factors--light, temperature, humidity, and atmospheric content--on biological systems in order to help understand their growth and development. The marked increase in interest in environmental problems has led to many requests for the Laboratory's data. To continue this research at current levels, a support funds increase of \$34,000 is required plus \$28,000 for utility rate increases. These increases are due solely to inflationary costs of supplies, materials, utilities, and equipment. Necessary pay requirements for present staff amount to \$27,000.

PROGRAM - Light is the key controlling environmental factor for development and growth of biological systems. Storage of solar radiation as chemical energy in photosynthesis is basic for all life on earth. The utilization of this energy is regulated by subtle changing signals of light quality, duration, and intensity. A primary objective of the Laboratory is to explain the influences of the various factors in the environment--light, temperature, humidity, and atmospheric content--on growth and development and to characterize the molecular mechanisms through which these signals operate.

This aim is accomplished by studying these environmental influences on plant growth and development in the Laboratory <u>under controlled conditions</u> using biochemical, biophysical, and physiological techniques and then verifying the <u>importance of these processes in nature</u> by monitoring the natural, dynamic environment. An example of spinoff value from these measurements is the collection of ultraviolet light data useful for assessing the potential biomedical threats of change in the ozone layer of the atmosphere. Such programs of research by their very nature are long-term and require the concerted team efforts of many scientific disciplines.

The research of the Laboratory consists of three principal areas: (1) regulatory biology, (2) environmental biology, and (3) carbon-14 dating. Since its inception in 1928, the Laboratory has pioneered research into the influences on growth of the color quality of visible and near visible light, such as ultraviolet. The present experimental

program is of greater scope than in any other single laboratory in this country and perhaps in the world. The Laboratory has been credited with major contributions in the field of photobiology and several first achievements in action spectroscopy.

JUSTIFICATION OF \$34,000 INCREASE (Research Support) - The requested additional funds are needed to maintain current programs at a no-growth level. The costs for chemicals used regularly from three major manufacturers and suppliers of chemicals and supplies have increased this year by an average of 35 percent, and for general laboratory supplies by 20 percent. This trend is not expected to subside. To maintain minimal adequate levels, an increase of \$10,000 is required in other services, \$10,000 for supplies and materials, and \$5,000 for equipment.

Data from the remote stations must be transmitted to the Laboratory. In addition, to assure accurate calibration and continuous operation of these stations, staff must make site visits at least once per year. Sites are located in Barrow, Alaska; Panama; Tallahassee, Florida; and Jerusalem, Israel. To maintain these stations and analyze and produce research data requires an increase of \$2,000 for transportation of things, \$4,000 for travel, and \$3,000 for printing and reproduction.

Utility costs continue to rise exponentially. Environmental growth rooms are lighted and powered electrically. Electric costs alone increased 44 percent last year, even though an effective program of energy reduction for the Laboratory as a whole was achieved. Funding of \$28,000 to maintain current programs is included in the Uncontrollable section.

Major Accomplishments in FY 1974

Scanning radiometers, instruments for measuring and monitoring discrete bands of ultraviolet energy from the sun and sky, have been developed and constructed. Ultraviolet measurements using these instruments are of particular interest in the health sciences. There are, for instance, data which implicate ultraviolet fluctuations in the frequency of incidence of skin cancer. Three such monitoring stations are now operating. Two more will be completed by the end of the fiscal year. The resulting data are being published.

Another important factor in solar irradiance measurements is the primary standard to which all measurements are referred. A symposium was held at RBL this year, at which 23 international authorities presented papers on methods of evaluation and intercomparison. The resulting RBL publication is expected to become a reference standard in this field.

Blue light is known to initiate the biosynthesis of yellow pigments, such as the vitamin A precursor, B-carotene. The biochemical pathway for the control of synthesis of these vitamin precursors is being studied, and four new mutants that can produce yellow pigments in the dark have been induced by ultraviolet irradiation. These mutants are powerful tools in characterizing the biochemical pathways and should provide information which would allow control of the synthesis of these vitamin precursors.

OFFICE OF INTERNATIONAL AND ENVIRONMENTAL PROGRAMS

1974 Actual......\$910,000 1975 Estimate.....\$571,000 1976 Estimate.....\$586,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	25	0	25
11 Personnel Compensation	452	14	466
12 Personnel Benefits	39	1	40
21 Travel & Trans. of Persons	13		13
23 Rent, Comm. and Utilities	34		34
24 Printing and Reproduction	12		12
25 Other Services	13		13
26 Supplies and Materials	5		5
31 Equipment	3		3
TOTAL	571	15	586
Analysis of Increase			
Necessary Pay		15	
Program Funds		0	

ABSTRACT - The Office of International and Environmental Programs (OIEP) oversees the International Activities Program and the Center for Short-Lived Phenomena and coordinates research on the environment abroad. No program increase is sought for FY 1976. Necessary pay in the amount of \$15,000 is sought for existing staff.

PROGRAM - Reorganizations implemented in FY 1974 resulted in the creation of the OIEP. The Office of Environmental Sciences, without the Oceanographic Sorting Centers in Washington and Tunis, was combined with the Office of International Activities. The Oceanographic Sorting Centers were placed in the National Museum of Natural History and the International Environmental Program was placed directly under the Office of the Assistant Secretary for Science.

The newly established OIEP oversees the International Activities Program and the Center for Short-Lived Phenomena and, in addition, coordinates research on the environment abroad for improved understanding of natural systems. A four-year study of water-borne diseases in the Lower Mekong River has been completed. A single-year study of the postimpoundment ecological analysis of a reservoir on the Nam Ngum River and another reservoir on the Volta River (Ghana) will be completed during FY 1975. Similar ecological studies of two major lakes in Yugoslavia are still underway. In addition, OIEP cooperates with the Peace Corps in planning and staffing volunteers in environmental and natural resources programs in developing countries. Volunteers skilled in environmental and biological sciences are recruited for two-year assignments in projects operated by host governments or international organizations. Over 400 volunteers, selected from among the 2,000 applicants to this program, have been placed in environmental assignments in 45 countries. The program is supported under a contract with the Peace Corps.

The International Activities Program administers the Smithsonian Special Foreign Currency Program (SFCP) and the International Liaison Section. The SFCP supports museum programs, scientific and cultural research, and related educational activities in six countries where the United States owns local currencies in "excess" of its needs as determined by the Treasury Department. More than 230 institutions in 34 states and the District of Columbia have benefited from the Program, which in FY 1974 supported 170 projects involving approximately 300 American and 150 foreign investigators. An appropriation of \$2.0 million "excess" foreign currency is requested for FY 1976. This

amount includes \$1.0 million for research projects and \$1.0 million for the third of four annual contributions through UNESCO to Egypt for the preservation of the monuments at Philae.

The International Liaison Section has been created to meet the need for effective coordination of the Smithsonian's increasing international activities, especially those related to the Bicentennial. Responsibilities include coordination of Smithsonian activities abroad with the State Department, participation in Subcommittees for Education and Culture and for Science and Technology that form part of the newly established Bilateral Commissions between the United States and several countries in the Mideast, contact with foreign governments for research and travel permits, assistance to the Folklife Festival program for foreign performing arts groups, and coordination of requests for foreign exhibits.

The Center for Short-Lived Phenomena operates a global environmental alert network for rapid communication of scientific data on biological and geological environmental events of short duration to scientists and officials with monitoring responsibilities.

Included in the CSLP's program are: the International Student Alert Network which now includes more than 60,000 students in over 1,000 high schools and universities in the United States and in 18 foreign countries, and an International Pollution Alert Network which involves more than 800 professional environmental monitoring programs in more than 60 countries. The Center's reports make it possible for scientists to conduct research while short duration events are occurring. The first world directory of environmental monitoring organizations was compiled by the Center under a United Nations contract.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

1974 Actual.......\$344,000 1975 Estimate......\$443,000 1976 Estimate......\$539,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	18	4	22
11 Personnel Compensation	303	74	377
12 Personnel Benefits	26	7	33
21 Travel & Trans. of Persons	6		6
23 Rent, Comm. & Utilities	32		32
24 Printing and Reproduction	2		2
25 Other Services	25	8	33
26 Supplies and Materials	34	5	39
31 Equipment	15	2	17
TOTAL	443	96	539
Analysis of Increase			
Necessary Pay		14	
Program Funds		82	

ABSTRACT - The Chesapeake Bay Center for Environmental Studies (CBCES) is a natural area for research in complex land-water relationships and for use in creating public awareness and understanding of ecological systems as they may be affected by economic and social change. The FY 1976 budget shows an increase of 4 positions and \$82,000 to provide the following program and support needs: (1) Research - a scientific program coordinator (\$40,000) to give unified direction to ecosystem and land use research; (2) Education and Public Orientation - an education assistant (\$12,000) to conduct workshops, conferences and tours; and (3) Buildings and Facilities Management - a maintenance worker and a custodian (\$20,000) and \$10,000 for supplies, services and equipment for the care of the Center's property. An additional amount of \$14,000 is needed for necessary pay.

PROGRAM - The Chesapeake Bay Center is a 2,500 acre area located on the Chesapeake Bay, seven miles south of Annapolis, Maryland, about equidistant from Baltimore and Washington. It was established in 1965 for the purpose of creating scientific and education programs in the environmental sciences leading to a more complete understanding of complex natural relationships and the proper balance of land-water uses as they relate to human health and welfare. The development of these programs was made possible by the acquisition (with non-appropriated funds) of a land-water unit large enough to include a full range of forests, marshes, fields, and agricultural areas. Taken together, these form the mosaic of land uses characteristic of the mid-Atlantic region since settlement. The area is ideal for study of the results of man's past and present activities as vital components of interacting physical and biological systems. Thus, the Center provides a living museum of contemporary and historical significance, a primary resource for teaching and research on complex living systems. It is the largest facility in the nation available for the study of land-water (estuarine) relationships.

The research program is being conducted in conjunction with Federal agencies and universities and is a long-term effort to understand the functioning of terrestrial and estuarine ecosystems. Current research is focused on the Rhode River and its watershed. Estimates are being made of the amounts of nitrogen and phosphorus received by Rhode River from rainfall, surface runoff, and the adjacent waters of Chesapeake

Bay. Measurements are also being made of the amount of bacterial and sediment loading to Rhode River from land runoff on over five square miles of watershed. The extent of nutrient uptake and sediment and bacterial trapping by estuarine marshes is also being measured. These contemporary studies are linked to an intensive analysis of land use changes which have occurred in Rhode River watershed since the time of first settlement. The objective of this research is to determine the effect of changing land use patterns on terrestrial and estuarine ecosystem processes.

Education programs are based on the Center's environmental research activities and are intended to serve youth and adult groups. Activities include workshops and conferences for a variety of citizen groups in order to provide information on the planning and management significance of regional ecosystem research. There are joint efforts with other academic and private institutions in promoting adult outdoor environmental education. The Center serves as a regional clearing house and implementation center for nationally significant outdoor biology education projects. It conducts regional school-tour programs and out-of-school environmental education experiences for children, and research and education training for high school and college students.

JUSTIFICATION OF \$82,000 INCREASE - The Center carries out much of its work on short-term grants and contracts from government and private sources. Appropriated funds have been used to manage the facility and to assure the continuity of what must be long-range research studies.

Research - The CBCES is presently conducting a major project in ecosystem research focusing on the relationship between watershed land runoff and its impact on the estuarine environment. This is the largest such project presently being conducted on an estuarine system in the United States. Overall supervision and direction of this project is needed to ensure the close collaboration among participating scientists necessary for quantitative ecosystem analysis. For this function \$40,000 is requested to fund a scientific program coordinator and provide a small amount of data processing support.

Education and Public Orientation - In FY 1975, a full-time education specialist was added to the Center's staff to supervise and coordinate public education programs. As a result, demands for adult workshops and programs and visits by metropolitan area elementary and secondary schools have substantially increased. Moreover, the new education building at the CBCES (constructed with non-appropriated funds) has made available indoor facilities for a wide variety of education activities. Currently, it is not possible to meet these demands and in calendar year 1974, the Center was forced to reject some 35 requests from elementary and secondary schools for tours and programs. To meet this need a full-time education assistant is requested (\$12,000). This should enable a doubling of the Center's capability for conducting education programs and meet projected demands through FY 1976.

Facilities Support and Maintenance - Based on the projected use of the Center's new education building, a full-time custodian will be needed. Also, one additional position is required to serve in general maintenance of the Center's property and facilities and tend a series of stream weirs that have been constructed on the Center's property to measure and record five separate parameters of rainfall washing over the Rhode River watershed and carrying nutrients into the Chesapeake Bay. These two positions will cost \$20,000. Supplies, materials, services, and equipment needed for the maintenance of buildings and other property require an additional \$10,000.

NATIONAL AIR AND SPACE MUSEUM

1974 Actual......\$2,632,000 1975 Estimate.....\$4,034,000 1976 Estimate.....\$5,537,000

Base FY 1975	Increase Requested	Est. FY 1976
165	65	230
2,151	453	2,604
187	38	225
11	12	23
10		10
10		10
17		17
1,112	865	1,977
325	60	385
211_	75	286
4,034	1,503	5,537
	73	
	1,430	
	FY 1975 165 2,151 187 11 10 10 17 1,112 325 211	FY 1975 Requested 165 65 2,151 453 187 38 11 12 10 10 17 1,112 865 325 60 211 75 4,034 1,503

ABSTRACT - The National Air and Space Museum (NASM) was created to memorialize the national development of aviation and space flight; collect, preserve, and display aeronautical and space flight artifacts of historical significance; and serve as a repository for documentary and artistic materials related to air and space. An increase of \$1,430,000 and 65 positions is requested to provide the necessary manpower and other objects of expense to prepare exhibits and programs for the opening of the new NASM building on July 4, 1976. Specifically, these increases are: (1) Custodial staff - 57 positions (\$315,000) and support funds (\$45,000); (2) Presentations and Education - 3 positions (\$49,000) and support funds (\$55,000) to assist in the development and preparation of spacearium/planetarium shows; (3) Exhibits production - 4 positions (\$45,000) and support funds (\$862,000) to assist in the preparation and installation of exhibits; (4) Administration - 1 position (\$9,000) to assist with the clerical workload; (5) Preservation and Restoration - Support funds (\$50,000) to move artifacts from Silver Hill, Maryland, and place them in the new museum. Necessary pay in the amount of \$73,000 is requested for existing staff.

PROGRAM - The new NASM building is expected to be a major feature of the Bicentennial celebration, dedicated to communicating the history, science, and technology of flight in ways understandable to the public, and to recognizing and celebrating the leadership role that America has played in the advance of air and space achievements.

The principal effort of the NASM will continue to be directed towards the opening of the new museum building on July 4, 1976. This building will embody 25 major exhibition galleries and 2 large presentation centers. Total exhibit and presentations space will be approximately 250.000 square feet.

The following list shows the 25 halls that are expected to be in the completed building. Titles are tentative but indicate the themes of the exhibits.

National Air and Space Museum Major Exhibition Halls

Vertical Flight and Rotary Wing Flight
Air Transportation
Earliest Birds
Kitty Hawk Flyer
Index Exhibit
Large Space Vehicles
History and Technology of Space Flight
General Aviation
Exhibition Flight
Air Traffic Control and Navigation
Earth Flight Environment
Trophy Hall
Space Flight Environment

Life in the Universe
Satellites and Space Probes
Earthbound Benefits From Flight
Sea-Air Operations
Understanding Air and Space
Technology and Materials
World War II Aviation
Lighter Than Air
World War I Aviation
Significant Aircraft and Spacecraft
The X Airplanes
Flight to the Moon
Air and Space in the Arts

To date, five of the core exhibits have been completed and tested in the Arts and Industries Building. These prototype halls have featured advanced presentation techniques which have been extremely well received. A major objective of this prototype exhibit program has already been met, that is, the development of a superior exhibits design and production staff and the construction of a production facility at Silver Hill. Successful planetarium shows have been running in the 30-foot domed Experimentarium which was constructed to test programs and equipment and to develop a staff for the new Spacearium. All shows and equipment will be revised for incorporation into the 70-foot dome Spacearium with its more sophisticated, computerized star projector and supporting audio-visual equipment. A first film for the theater has been written and is now awaiting production.

The restoration and installation of the full-sized air and space craft now in storage at Silver Hill will continue to provide the artifacts needed for the new building exhibits. Of the approximately 60 aircraft that are planned to be exhibited in the new building, 35 are now ready with the remaining 25 in various stages of restoration. The percent completion for the various space artifacts planned to be exhibited is approximately the same.

JUSTIFICATION OF \$1,430,000 INCREASE - FY 1976 marks the final period to complete the opening exhibits and presentations and ready the museum for the public. The detailed gallery designs and presentations produced in FY 1975 are to be fabricated and installed with FY 1976 funds. Complicated electromechanical and audio-visual equipment for exhibits and the planetarium must be installed, tested, and made operational. Programs must be developed for the theater and planetarium. The building must be made habitable. Aircraït and spacecraft, which have been restored over the past three years, must be moved from the Silver Hill facility to the building for placement in exhibit areas. Specifically the increase is requested for:

Exhibits Production - As planned, all 25 exhibition galleries will open to the public when the museum opens. Exhibit galleries are in design and production, each covering an important facet of the total history, science, and technology of flight. By the opening date, 40 to 50 percent of the space in the various galleries will contain long-term exhibit units, and the remaining space in the galleries will show educational interim installations such as labeled aircraft and spacecraft. In addition to new exhibit design and production in FY 1975, NASM will redesign 4 exhibit galleries that had been prototyped in temporary facilities for trial and evaluation. This redesign will make it possible to install these exhibitions in the new building, modified to reflect lessons learned during the trial runs. Additionally, eleven new exhibits are being researched and designed, using both staff and outside contracts. These exhibits will be fabricated and installed in the building during FY 1976.

Four additional exhibits personnel (\$45,000) (four electronic technicians, two of whom have electromechanical backgrounds) will be required to assist in the design, installation, test and operation of a wide assortment of slide and motion picture projectors; tapc decks; visitor participation units; electrical dioramas; special lighting effects; TV units; and other such complicated electronic systems found in modern museums. Funds (\$850,000) are necessary for the supporting services, supplies, materials and equipment to construct and install permanent exhibitions in 5 of the 15 galleries that will contain long-term exhibits. This increase will provide NASM with the ability to open with approximately 50 percent of the permanent exhibits in place. Without it, only 30 percent of the museum's galleries will be complete. Travel funds (\$12,000) are needed to oversee exhibits production.

Presentation and Education Division - Three personnel, an education and information specialist, a planetarium production specialist and a planetarium presentation specialist (\$49,000) are required to work with the current staff in preparation and production of planetarium shows and the development of educational programs using the planetarium and theater facilities and other museum resources. Funds are also requested to purchase special equipment, supplies, and materials (\$55,000).

Preservation and Restoration - The entire staff of the Preservation and Restoration Division will be involved in the moving and installing of major artifacts into the new building. Sixty-eight aircraft and seventy-five major space artifacts will be displayed to the public, either singly or as components of exhibit units. Seventy-five of these artifacts will be hung from the ceilings of the various exhibition halls. In addition, 4 missiles, Jupiter C, Vanguard, Scout, and Minuteman 3, will be placed upright in the Space Hall. Funding (\$50,000) is necessary to provide special handling equipment, material and the temporary services of professional riggers to assist the NASM staff in moving and mounting these artifacts.

Building and Facilities Management - In FY 1976 the janitorial functions were decentralized and each museum was given the reponsibility and manpower to maintain its own facilities. NASM received a skeleton force and funds to support the staff for the last quarter of FY 1975 (during the period the NASM moves into the building). To supplement the present staff and make the building ready for the public, an additional 52 janitors and laborers and 5 supervisors are required plus funds to annualize the 25 positions authorized in FY 1975 for one quarter (\$315,000) and funds (\$45,000) for supporting supplies, materials and equipment.

Administration - An additional clerk-stenographer (\$9,000) is required to assist with the increase in clerical tasks in the museum

CENTER FOR THE STUDY OF MAN

1974 Actual......\$293,000 1975 Estimate.....\$322,000 1976 Estimate.....\$385,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
(**************************************			
Number of Permanent Positions	11	11	12
11 Personnel Compensation	233	31	264
12 Personnel Benefits	20	3	23
21 Travel & Trans. of Persons	7	12	19
23 Rent, Comm. & Utilities	3		3
24 Printing and Reproduction	2		2
25 Other Services	51	17	68
26 Supplies and Materials	1		1
31 Equipment	5		5
TOTAL	322	63	385
Analysis of Increase			
Necessary Pay		14	
Program Funds		49	

ABSTRACT - The Center for the Study of Man (CSM) has several anthropological and human science programs: continued development of the Encyclopedia of North American Indians; sponsorship of an urgent anthropological program; coordination of international anthropological efforts on current social problems; conduct of an immigration and ethnic studies program; and an anthropological film study center. An increase of \$49,000 and 1 position is requested for the following program needs: (1) support funds (\$29,000) for Immigration and Ethnic Studies and (2) 1 position and \$20,000 for the National Ethnographic Film Center and Archive. An amount of \$14,000 is needed for necessary pay.

PROGRAM - The CSM coordinates research and development on a series of important anthropological programs. The American Indian Program is presently concerned primarily with the development of the 20 volume Encyclopedia of North American Indians to be published for the Bicentennial. It will contain 1,000 articles. Forty percent of the manuscripts are now complete and the development of design and specifications for printing is well along. Funds for the actual printing of the Encyclopedia are contained in the Bicentennial budget request.

Another aspect of the American Indian Program is the development of a system for providing scholarly educational materials concerning Indians to individuals, schools, and Indian communities. In addition, the Center helps to coordinate educational intercommunication among Indians themselves, with scholars, and with appropriate Government and private agencies.

As work on the <u>Encyclopedia</u> progresses, it becomes increasingly clear that there are dangerous gaps in the knowledge of North American Indian cultures. In particular, there is a pressing need to interview within the next few years the tribal elders who are anxious to fill in the record of their proud past. The Urgent Anthropology Program which identifies, publicizes, and finances, by means of small awards, needed research in geographical areas that are undergoing rapid environmental change as a result of urbanization, improved communications, better transportation, and other factors has been helpful in this respect. Its objective is to salvage and preserve information in selected rapidly changing areas before time and events erase our ability to understand the cultures that existed.

The American Indian program has focused particularly on bridging the gap between present-day Indians and their archeological past. Field research is being conducted in Louisiana, Mississippi, Texas, South Carolina, Georgia, Alabama, North Carolina, Arizona, Idaho, Washington, California, and South Dakota. Portions of the research which is producing chapters for the Encyclopedia are also relevant for closing the gap between past and present. For instance, a Pima Indian is carrying out a study of the history, language, songs, legends, and crafts of the Gila River Pima with funding support from the Center.

The Cross-Cultural Research Program is coordinating the efforts of numerous anthropologists and other human scientists in developing new, comparative information on population, environmental, and educational studies. Comparative research on world use of cannabis and alcohol has also been carried out.

The comparative Immigrant and Ethnic Studies Program is carrying out basic research in the United States, Canada, the circum-Caribbean area, and the Panama Canal Zone. It investigates the special conditions which stimulate immigration, assesses the contributions made by immigrants, and studies the effects of immigration on the source country and on the target country. Field research, archival research, and statistical methods are all used.

The Center has established a National Ethnographic Film Center and Archive in response to requests from a number of Federal agencies (National Science Foundation, National Endowment for the Humanities, National Institutes of Health, etc.) and from other concerned organizations and individuals. The purpose of this unit is to record, collect, and preserve the cultures of North American Indians and other peoples as recorded on film. Much of the film being collected is in great danger of destruction and the need for immediate action is clear. Initial funding for this program has been from outside sources.

JUSTIFICATION OF \$49,000 INCREASE (Research):

A total of \$29,000 is requested for the Research Institute on Immigration and Ethnic Studies. This money is needed for consultants, seminars, field research, and coordination of programs which the Institute is committed to in Washington, D.C., the Caribbean, and the Panama Canal Zone.

Anthropological film archives have been established as valuable national resources in a number of European countries, but there are as yet no archives or film collections in this country carrying out such a role. The Library of Congress Film Unit is confined to collecting and preserving films that have been copyrighted for commercial distribution. Since over ninety percent of all film taken by American anthropologists is not copyrighted, it therefore does not find its way into the LC archives. There is an urgent need for an archive to obtain and preserve the growing body of anthropological film in this country, much of which is being lost almost as surely as if it had never been taken. This is because the anthropologist-film maker typically exhausts his resources in making one or two short edited films out of all his footage, with a usual shooting ratio of one part used in an edited film to ten to fifteen parts unused, or out-take material, which is often just as valuable for the scientific record or educational purposes as whatever may go into an edited print. Currently, the anthropologist-film maker has no place to go for help in making research copies and in properly annotating his footage. As time goes by, master prints are cut up, film crews disband and memory fades. In this way enormous quantities of valuable footage rapidly deteriorate or are lost.

In making this request the Institution considers that it cannot be primarily responsible for field support (new filming) or duplication of research prints to be

deposited in the archive, both of which are necessary but costly operations. Rather, the Smithsonian views the principal objectives of the proposed archive and study center as follows:

- --To bring together and preserve existing anthropological films and unedited footage, annotated and catalogued for maximum research and educational utility.
- --To initiate, encourage and otherwise collaborate in the film documentation of naturally occurring behavior in disappearing cultures.
- -- To provide a study center for the research uses of anthropological film.
- --To serve also as a resource for the interested general public and ethnic groups, such as American Indians, to cite one example, who are extremely interested in film records of their own past for educational purposes and for the small tribal museums now being established on many reservations.

A total of \$20,000 is requested for the Anthropological Film Study Center. This money will be used to hire a Director for the Center.

NATIONAL ZOOLOGICAL PARK

1974 Actual......\$4,564,000 1975 Estimate.....\$5,482,000 1976 Estimate.....\$5,882,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
	113.5	1104403204	
Number of Permanent Positions		10	304
11 Personnel Compensation	3,922	257	4,179
12 Personnel Benefits	323	24	347
21 Travel & Trans. of Persons	19	2	21
22 Transportation of Things	8	2	10
23 Rent, Comm. & Utilities	240	58	298
24 Printing and Reproduction	16	0	16
25 Other Services	246	3	249
26 Supplies and Materials	554	34	588
31 Equipment	152	20	172
41 Grants	1		1
42 Insurance Claims [§] Indem	1		1
TOTAL	5,482	400	5,882
Analysis of Increase			
Necessary Pay		176	
Other Uncontrollable		44	
Program Funds		180	

ABSTRACT - The National Zoological Park (NZP) is located on 156 acres in Rock Creek Valley and manages another 3,000 acres near Front Royal, Virginia. The Zoo exhibits a large and varied animal collection; serves the information, education, and service needs of the public; and conducts programs of research, animal health, and conservation. NZP budget requirements for FY 1976 include an additional 10 positions and \$180,000 to support current programs including: (1) Collection and Facilities Management - 4 animal keepers, 1 mechanic, and 1 exhibits specialist (\$62,000) and support funds of \$40,000 to place into service exhibit facilities now under construction; (2) Collections Management - \$20,000 to keep pace with cost increases for animal food and care; and (3) Research and Conservation - 2 animal keepers and 2 mechanics (\$43,000) and support funds of \$15,000 to sustain progress in breeding and research efforts. Further amounts of \$176,000 for necessary pay and \$44,000 for utility rate increases are requested in the Uncontrollable Section.

PROGRAM - In 1889, Congress established the National Zoological Park for the "advancement of science and the instruction and recreation of the people." To accomplish those purposes, the Zoo exhibits a broad variety of animals representing one of the most important collections of rare and endangered species in existence; maintains information, education, and visitor service programs for the public from all over the United States; and undertakes scientific research, including biomedical studies, for the increased understanding and healthful well-being of the animals.

The National Zoological Park is the Nation's Zoo:

--welcoming each year visitors in large numbers from every state. In 1974, visitors celebrated with Zoo staff the births of many rare and fascinating animals, including the first Indian Rhinoceros born in the Western Hemisphere. Educational programs and graphic displays enable each visitor to derive new understanding about animals of the collection and an awareness of issues relating to the interrelationships between man and animal as we share a world together.

- --leading the way in enlightened collections management. The Zoo provides for each animal's physiological and psychological needs; preserves its gene pool through selective breeding efforts as the number of its kind in the wild disappears, sustains it in good health for a full and useful life demonstrating to man the character and worth of its own kind.
- --sharing learning with the public, scholars, and other zoos. Basic research at the National Zoo is resulting in increased understanding of the behavior and survival strategies of diversified representatives of the animal kingdom. Biomedical studies have led to improved health of Zoo collections through early recognition and treatment of the illnesses and infirmities affecting exotic animals. The Zoo is an important resource of training for doctoral scholars observing healthy animals, and is an intern site for veterinary clinicians and pathologists who will eventually care for exotic animals in other American zoos.
- --innovating strategies to aid the conservation of rare and endangered species. Efforts in 1975 include field research and development of a research and conservation center to permit pooling animals in partnership with other zoos and to provide space for more natural and successful breeding.
- --developing prototype education programs for Zoo visitors and student groups.

The increasingly sensitive job of managing so complex and irreplaceable a world of animals calls on many talents and outlooks. Too often overlooked is the essential work that Zoo craftsmen perform--keeping the Zoo open, clean, inviting, and sightly. In FY 1975, training is underway to insure the continued availability of maintenance skills--electricians, carpenters, operating engineers, metalworkers, masons, painters, gardeners, and welders. Talented individuals in graphic arts and education have joined the Zoo staff to make the visitor's stay more enjoyable and illuminating. The animal keepers are receiving training so that their creative talents may keep pace with the needs of the collections. Responsive and able medical assistance is delivered by a capable staff. The curatorial and research staffs refine reproductive strategies and bring into planning new knowledge gained through research on-site and in the wild.

To continue to do the Zoo's job well and hopefully better is the goal that all of the Zoo staff members share. The Zoo's role has never been more important--to promote understanding and conservation of rare animals; to provide a wholesome, entertaining learning opportunity for each visitor; and a good home for animals of the collection.

JUSTIFICATION OF \$180,000 INCREASE:

Collections and Facilities Management - In FY 1976, Zoo animals and visitors will benefit from improved exhibit facilities. Key steps in their necessary sequence within the approved Master Plan for the rebuilding of the Zoo will be realized. The renovated Monkey House will be in service throughout 1976. Upgrading of the Bird House Plaza and Elephant Yards will be completed in the first half of FY 1976. The major new Lion-Tiger Complex will be completed in the last quarter of FY 1976 and opened to the public during the transitional and intensely active Bicentennial period of July-September 1976. These are among the first of a series of long needed new structures bringing the National Zoo forward in its service to the visitors and to the animal collection. Further details on the Master Plan appear in the Construction section of this budget.

To place these new facilities into service, the Zoo must:

--selectively acquire animals, including Indian Lions (Panthera Leo indica) and a pair of Snow Leopards (Panthera uncia).

- --defray the travel costs of locating and moving animals.
- --feed all animals adequately for essential nutritional needs.
- --buy supplies and equipment needed for the best possible care of an increasingly irreplaceable collection and expanded exhibit areas.
- --buy display materials and manufacture exhibits useful for visitor appreciation of animal life in the wild and in the Zoo.
- --meet the part-year costs of utilities and maintenance for the new structures (the complex heating and air-conditioning systems of the Lion-Tiger Complex and Monkey House for a full year's operation will require increased energy and support costs).

An amount of \$40,000 is sought for these purposes.

Four animal keepers will care for the revised and elaborated animal collection. An exhibit specialist will produce in-cage environments and true-to-life displays that are educationally useful to Zoo visitors and encourage natural behavior on the part of the animals. A heating, refrigeration and air-conditioning mechanic will tend the complex mechanical systems added for the well being of Zoo animals and comfort of visitors. These additional staff will cost \$62,000.

Care and Management of the Collection - The National Zoo's collection in large measure must sustain itself. The Zoo is leading the way toward becoming a producer and not a consumer of animals. Since 1972, mammal births have not increased because of space shortages but the survival of newborn animals has increased from 67 to 75 percent. Bird hatchings doubled over the same span. Reptile and amphibian hatchings tripled (from 33 to 105) and the survival rate increased to 90 percent.

Such hard won success has not been accidental but has resulted from the efforts of knowledgeable curators, keepers, and health specialists. The Zoo needs to keep pace with the increasing needs for new medicines and diagnostic aids that will allow delivery of the best and timeliest treatment possible. The Zoo must meet the nutritional needs of the collection's animals. The Zoo cannot defer, delay, or avoid the costs of feeding the animals. Food costs continue to skyrocket. Even should inflationary rates begin to slacken, absolute dollar outlays for food will increase. A further \$20,000 is requested for these purposes.

<u>Conservation and Research</u> - The National Zoo emphasizes research and conservation efforts in order to increase man's understanding of conditions that are essential for the preservation of rare and endangered species.

Ample space for animals is being developed near Front Royal, Virginia to establish conditions for successful breeding in collaboration with other American zoos. The area also serves as an additional food source to satisfy the increasingly special and costly nutritional requisites of exotic animals. Instead of bringing hay from the Dakotas, the precise trace elements needed exist in hay fields at Front Royal. To use those unique and long-range opportunities, the Zoo must add two animal keepers, a farm equipment operator, and a plumber (\$43,000).

The Zoo must replace obsolete farm equipment, lime and fertilize fields, and maintain barns and other buildings. The continued advancement of innovative and productive research into general and reproductive behavior necessitates that the Zoo complete field studies. One focus of Zoo research is vertebrate and invertebrate communications. To keep this productive effort underway, depreciated and undependable equipment must be replaced. These needs will require an additional \$15,000.

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

1974 Actual.......\$242,000 1975 Estimate......\$257,000 1976 Estimate......\$267,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	11	0	11
11 Personnel Compensation	231	9	240
12 Personnel Benefits	13	1	14
21 Travel & Trans. of Persons	4		4
25 Other Services	4		4
26 Supplies and Materials	4		4
31 Equipment	1		1
TOTAL	257	10	267
Analysis of Increase			
Necessary Pay		10	
Program Funds		00	

ABSTRACT - The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, and reviewing the progress of Smithsonian history and art programs. In addition, this office oversees the planing and coordination of the Smithsonian's Bicentennial programs and projects. Also included under this heading are the American Studies program, the Joseph Henry Papers project, and the Art Quarterly. No program increase is sought for FY 1976. An amount of \$10,000 is requested for necessary pay.

PROGRAM - I. Immediate Office: With a base of four positions and \$122,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, coordinating, and reviewing the progress of the programs of the Smithsonian history and art bureaus and offices. In addition, this office oversees the planning and coordination of the Smithsonian's Bicentennial programs and projects. The bureaus and offices reporting directly to the Assistant Secretary for History and Art are the Archives of American Art, Cooper-Hewitt Museum of Decorative Arts and Design, Freer Gallery of Art, Hillwood, Hirshhorn Museum and Sculpture Garden, National Collection of Fine Arts, National Museum of History and Technology, National Portrait Gallery, Office of Academic Studies, Office of American Studies, the Joseph Henry Papers, and the Art Quarterly.

II. Other Central History and Art Activities: The remainder of the funding identified for this office, seven positions and \$145,000, supports the American Studies program, the Joseph Henry Papers project and, beginning in 1976, the Art Quarterly. The Office of American Studies organizes and conducts a formal program of graduate education in the material aspects of American civilization, and participates in the overall program of historical, archaeological, and architectural history research at St. Mary's City, Maryland, as funded by the State of Maryland, National Endowment for the Humanities, Rockefeller Foundation, and other foundations. The Editor of the Joseph Henry Papers and his staff have been gathering and preparing for publication the manuscripts of Joseph Henry(1797-1878), the pioneer American physicist and first Secretary of the Smithsonian Institution. Volume one of a multivolume set was published in December 1972. Volume two will be sent to the Government Printing Office early this year for publication in FY 1976. These and subsequent volumes are to be included in the documentary publications program of the National Historical Publications Commission. The Art Quarterly, probably the best and most important scholarly journal in its field in this country, will be published beginning this year by the Smithsonian Institution. Previously published by the Detroit Institute of Arts, the Quarterly exhibits a commitment to art historical scholarship of the highest quality and will lend additional strength to the public offerings of the Smithsonian's program in the arts. Through various economies and a minor reorganization of staffing patterns, this new activity will require no increase in Federal funding in FY 1976.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

1974	Actual	\$4,333,000
1975	Estimate	\$5,139,000
	Estimate	\$5,395,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	259	7	266
11 Personnel Compensation	4,229	192	4,421
12 Personnel Benefits	362	16	378
21 Travel & Trans. of Persons	34	1	35
23 Rent, Comm. & Utilities	20		20
24 Printing and Reproduction	50	1.5	65
25 Other Services	236	26	262
26 Supplies and Materials	100	4	104
31 Equipment	108	2	110
TOTAL	5,139	256	5,395
Analysis of Increase			
Necessary Pay		136	
Program Funds		120	

ABSTRACT - The National Museum of History and Technology (NMHT) is the repository of the collections documenting the historical and technological achievements of the American people. It has an active research and publication program and its exhibits receive more visitors than any other Museum in the world. The FY 1976 budget requests an additional 7 positions and \$120,000 for the following purposes: (1) Education and Public Orientation - 2 education specialists (\$25,000) and \$45,000 for program development and implementation to provide improved tour, orientation, and other information services to museum visitors and (2) Buildings and Facilities Management - 5 custodial positions (\$47,000) and \$3,000 of support to maintain building cleanliness standards. An additional amount of \$136,000 is required for necessary pay for existing staff.

PROGRAM - NMHT occupies a unique position among the great museums of the world. As the repository of the national collections documenting the historical and technological achievements of the American people, the Museum has responsibility for over 16,000,000 objects related to all facets of the American experience. Each of these objects must receive the highest level of professional care and preservation and must be stored and exhibited using the best techniques available.

Since opening in 1964, the NMHT has provided a variety and richness of public exhibits seen by over 60,000,000 visitors. The Museum annually receives more visitors than any other museum in the world. As the most visited museum in the world, it will be host to almost 7,000,000 visitors during FY 1975. It is anticipated that this annual attendance figure will total more than 12,000,000 by the Bicentennial year and continue at a high level.

As a center for the scholarly study of the history of American material culture and the history of science and technology, this Museum continues to support and encourage basic research and publication in many subject fields, ranging from early exploration to studies of contemporary American culture.

In FY 1975, the exhibition "Suiting Everyone," demonstrating the democratization of clothing in America, was opened with many favorable notices. Also opened were the small exhibit "California" and the temporary exhibits "The Madrid Manuscripts of



Representative of a continuing effort at the National Museum of History and Technology to serve broader audiences, a handicapped NMHT staff associate for education employs sign language to describe the Museum's largest "touch-it" object, the 280-ton "1401" locomotive.

Leonardo da Vinci," featuring the newly discovered Leonardo manuscripts which have never before left Spain, "Steuben, Seventy Years of American Glass," and "Lead and Zinc Mining Scenes of the Past." "We the People," an exhibition focusing upon the distinctive political process in the United States, will also open in the latter part of FY 1975. The major exhibit effort of the Museum, as well as a major portion of the energy of the entire staff, has been applied to the two very large Bicentennial exhibitions "A Nation of Nations" and, in the Arts and Industries Building, "1876: A Centennial Exhibit." In addition, progress is being made upon "Two Hundred Years of American Banking." This year has seen not only a concentration upon exhibit production, but also a rising investment of resources and time in collections management, publications, and education and public information.

JUSTIFICATION OF \$120,000 INCREASE:

Education and Public Orientation - The anticipated increase in visitors during the Bicentennial years and thereafter will require special provisions for their accommodation. Present facilities for public information and education are already being utilized to their capacity. It is planned that by the addition of staff and the development of self-guided tour and orientation film and slide programs these needs can be fulfilled. Among the needs foreseen are special facilities for foreign speaking visitors, who are expected in considerable numbers, and facilities for the handicapped. Special accommodation will have to be provided also for the greatly increased number of school tours coming from all over the country and outside the United States, as well as from local schools.

An orientation program is already under planning and will be ready for implementation as soon as funding is in hand. Provisions are being made for group orientation films which will identify the subject interests and exhibits of the museum, and deal with particular aspects of American civilization as illustrated in the public exhibits. Because of the great crowds expected, other orientation facilities are being developed, in the form of rear projection slide presentations in untravelled bays of the public areas. In addition, recruitment is in progress for an education specialist to develop programs and facilities for the handicapped. Plans have been made to use senior students from local institutions for the handicapped to serve as volunteer docents in the museum, for which service they would receive curriculum credit in their institutions.

The stepped-up public orientation and education program proposed for FY 1976 will require an audio-visual specialist, who will develop scripts in cooperation with the Museum staff for orientation films and slide presentations for the general public, and a coordinator of special education programs to schedule public and special group tours, supervise a volunteer docent program, and develop specialized tour brochures. These two new positions will cost \$25,000. Other object class funds in the amount of \$45,000 will be used for consultants in communication media and special education to provide advice on museum traffic control and orientation development; equipment and supplies to maintain the program, including video tape equipment and other educational devices; the production and installation of orientation films and slide programs developed by Museum staff; and the publication of orientation materials for visitors, including brochures for the handicapped and self-guided tours for school groups.

Buildings and Facilities Management - Faced by consistently high levels of visitor attendance the Museum's FY 1975 custodial staff of 47 is already hard pressed to keep the public areas of the building satisfactorily clean. A survey of building requirements has shown a need for about 65 such positions. Much staff overtime at premium pay is required to maintain minimum upkeep standards. Furthermore, it is estimated that public use of NMHT will almost double in 1976 making this Museum's annual attendance three to four times larger than any other museum in the world. It is requested that 5 additional custodial positions (\$47,000) with \$3,000 of support funds be provided to relieve partially this situation.

NATIONAL COLLECTION OF FINE ARTS

1974 Actual......\$1,778,000 1975 Estimate......\$2,074,000 1976 Estimate......\$2,247,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	100	3	103
11 Personnel Compensation	1,403	91	1,494
12 Personnel Benefits	125	8	133
21 Travel & Trans. of Persons	20		20
22 Transportation of Things	73		73
23 Rent, Comm. & Utilities	9		9
24 Printing and Reproduction	52		52
25 Other Services	221		221
26 Supplies and Materials	64	24	88
31 Equipment	87	50	137
41 Grants	20		20
TOTAL	2,074	173	2,247
Analysis of Increase			
Necessary Pay		69	
Program Funds		104	

ABSTRACT - The National Collection of Fine Arts (NCFA), the oldest national collection of art, is devoted to all aspects of American art, past and present, and maintains an active program of exhibition, publication, research, and conservation in the field. In FY 1976, three additional positions and \$104,000 are requested to meet the following requirements: (1) Collections Acquisitions - funding of \$50,000 to maintain a minimum acquisition program necessary to establish fully representative collections and (2) Buildings and Facilities Management - two laborers and a painter-helper (\$30,000) and an amount of \$24,000 for custodial and maintenance supplies and materials to clean and maintain adequately NCFA facilities. Necessary pay funds of \$69,000 are sought.

PROGRAM - This major collection of American art, the origins of which go back to the 1830's, was uncatalogued and ill-housed until the present facility was opened in the former Patent Office in 1968. The growing collection of some 17,000 works is now registered on computer and arranged, either in carefully planned galleries or in systematic storage, so that every work is available for public pleasure or scholarly study. About 1,700 works are on loan to public offices in the Washington area. Exhibitions are presented in the United States and abroad, and an active program of education is maintained for the schools and the general public.

In FY 1975, seventeen new exhibitions were presented by the NCFA. Of these, three were cooperative efforts with other institutions and fourteen were designed and produced by the museum. These included "American Art in the Barbizon Mood," "Man Made Mobile: The Western Saddle" (at the Renwick Gallery), "Academy: The Academic Tradition in American Art" and smaller exhibitions featuring one artist, such as Chaim Gross and Ilya Bolotowsky. Exhibitions were accompanied by authoritative publications prepared by the museum. Some eighteen separate publications were issued. All galleries devoted to contemporary art were reinstalled, and two galleries formerly devoted to borrowed works of Winslow Homer were installed with paintings and sculpture from the museum's collection. The two galleries devoted to landscape painting were reinstalled. In addition to the above, NCFA's Office of Exhibitions Abroad had a total of eight exhibitions circulating outside the United States.

The very active education program was expanded to offer further activities for school children and the public. Some 17,700 public school children attended sessions within the museum, and many others were reached in the schools themselves. This department also supervised fifty junior and senior high school students who participated in a junior intern program and seventeen college students who worked in a similar program. Thirty-eight museum interns were introduced to museum practices through on-the-job training.

JUSTIFICATION OF \$104,000 INCREASE:

Collections Acquisition - The National Collection of Fine Arts is, aside from its other functions, a museum of record. Its permanent collection strives to represent a cross section of American art of all periods and types, and special attention has been given to those aspects of art that might otherwise be overlooked in the changing fashions in taste. The effort has been to represent each significant American artist by a group of studies, as well as completed works, in order to record both the artist's creative procedure and his ultimate achievement. Care has been taken to concentrate particularly on artists not already well represented in other national collections. In the past year the museum purchased, among other works, paintings by excellent but little-known American painters working in Italy in the mid-nineteenth century (Walter Gould, George Loring Brown, William Carlton), works of two "self-taught" mid-western painters of the last century (Walter Griswold, Charles Brickey), a painting by the rarely represented painter and sculptor William Rimmer, and representative works of young contemporary artists. Most accessions come by gift - about 900 works a year including graphic works and studies - but if the proper historical and aesthetic balance is to be maintained and the collection is to be of service to future generations, a judicious program of purchase must complement the carefully screened donations. Because of rising costs in all areas of the museum's activities, it has been increasingly difficult to maintain the necessary minimum acquisition program. Major works, priced on the market today from \$150,000 and up cannot be considered for purchase on NCFA's present acquisitions budget of \$50,000, or even on the proposed budget of \$100,000; nevertheless, it is important to acquire such necessary works as can be afforded whenever possible. An increase of \$50,000 is requested simply to keep the acquisition program current.

Buildings and Facilities Management - The NCFA building management staff maintains its portion of the Fine Arts and Portrait Galleries building, the Renwick Gallery, and the Barney House. At the present time, the staff includes only two laborers for all three buildings and these laborers must also perform as supplementary custodial helpers. In order to be responsive to fifteen departments and offices and to the needs of the three buildings involved, the addition of two new laborers and a painter-helper (\$30,000) is requested. The painter-helper is especially important because the Fine Arts and Portrait Galleries building and the Renwick Gallery have been open to the public for six and three years respectively, and continual painting refurbishment is now necessary in order to maintain the visual standards and preventive maintenance programs of both museums. NCFA further requests \$24,000 for building management supplies and materials to operate at an acceptable level. With higher visitor levels anticipated during the Bicentennial and thereafter, these necessary support activities must be provided for adequately.

NATIONAL PORTRAIT GALLERY

1974 Actual......\$1,246,000 1975 Estimate.....\$1,544,000 1976 Estimate.....\$1,686,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	71	3	74
11 Personnel Compensation	1,015	62	1,077
12 Personnel Benefits	89	6	95
21 Travel & Trans. of Persons	16	3	19
22 Transportation of Things	14		14
23 Rent, Comm. & Utilities	8		8
24 Printing and Reproduction	2		2
25 Other Services	121	4	125
26 Supplies and Materials	57	10	67
31 Equipment	217	57	274
42 Insurance Claims & Indemnities.	5		5
TOTAL	1,544	142	1,686
Analysis of Increase			
Necessary Pay		38	
Program Funds		104	

ABSTRACT - The National Portrait Gallery (NPG) was established in 1962 as a free public museum for the exhibition and study of portraits depicting men and women who have made significant contributions to the history, development, and culture of the people of the United States. In FY 1976 an increase of 3 positions and \$104,000 is requested to meet the following program requirements: (1) Collections Acquisitions funding of \$50,000 to assist the Gallery in acquiring the collections necessary to fulfill its assigned responsibilities and (2) Buildings and Facilities Management - an additional \$54,000 to provide an electrician's helper, two janitors, and materials and services necessary to support Gallery operations and to maintain the historic building housing the Gallery in view of significantly increasing attendance, especially during the Bicentennial celebration and following the opening of Metro. An increase of \$38,000 in necessary pay is also requested.

PROGRAM - The National Portrait Gallery is the only national museum of American history that tells the history of the United States primarily in terms of the men and women who made that history. The portraits of these men and women are crucial documents of historical evidence and bear strong witness to the roles these people played in the American experience.

The Gallery's activities include: (1) the expansion and care of its collections; (2) public education through the exhibition of the permanent collection and specially organized temporary exhibitions; (3) the preparation and national distribution of scholarly and popular publications related to these exhibitions; and (4) the compilation of a definitive catalogue of American portraits, constituting a unique information resource in the areas of American history and biography, art, and iconography.

Attendance at the Fine Arts and Portrait Galleries during FY 1974 was in excess of 329,000, an increase of 30 percent over the previous year. In addition, three times as many young people and adults were served by the Gallery's education department during FY 1974 as in FY 1973, (33,000 versus 11,000). These trends have continued in the current year.

One hundred eleven portraits were added to the collection in FY 1974 and 1975. Sixty-six were acquired by purchase, including the only known life portrait of Frederick Augustus Muhlenberg, the first Speaker of the House of Representatives; John Trumbull's portrait of John Jay; a full-length cabinet-size portrait of John Marshall; a portrait of Dolley Madison; and busts of Abraham Lincoln and of Ralph Waldo Emerson.

Among the gifts were portraits of Richard Henry Lee by Charles Willson Peale, of Gouverneur Morris by James Sharples, William Lloyd Garrison by Anne Whitney (a plaster bust), and Andrew Carnegie--all the gifts of descendents. In addition, Mr. and Mrs. Paul Mellon presented a magnificent collection of 761 portraits engraved by C.B.J.F. de Saint Memin depicting important Americans from all walks of life, including Thomas Jefferson, Meriwether Lewis and William Clark, Paul Revere, Oliver Hazard Perry, and Mother Seton.

From June 14th to November 17th the Gallery presented the Nation's first Bicentennial exhibition entitled, "In the Minds and Hearts of the People: Prologue to the American Revolution, 1760-1774", consisting of 65 paintings and over 250 associative objects borrowed from collections in the United States and abroad. A second major exhibition, "American Self-Portraits" on view from February 1 to March 15, 1974, contained 109 paintings by American artists from colonial times to the present. Single-room exhibitions were installed with the Gallery's Saint Memin collection and a selection of portraits and letters of American artists from the holdings of the Archives of American Art, entitled "From Reliable Sources". In addition, several small exhibitions featuring portraits of selected individuals were organized.

With a goal of establishing a definitive collection of prints of notable Americans, the Gallery hired an assistant curator to organize and expand its holdings of 38,000 portraits in this medium.

In September, assisted by a grant from the National Endowment for the Humanities, the Gallery began a multi-year effort to publish in micro-film and selected letter press editions the papers of Charles Willson Peale, the American artist and scientist who was one of the most notable contributors to the early cultural history of the nation.

JUSTIFICATION OF \$104,000 INCREASE:

Collections Acquisition - In FY 1976, the Gallery is requesting additional funding of \$50,000 to increase its budget for acquisitions. The permanent collection of the Gallery presently consists of only 748 portraits, of which 439 were acquired by gift. During the past three years the acquisitions budget has averaged \$185,000, which has not been sufficient to add all the portraits not available by gift that the NPG Commission deemed desirable. To redirect funds from other areas would seriously detract from the Gallery's essential research, publication, exhibition, and educational programs. A large number of significant portraits still remain in private hands. Although some of these will surely come to the Gallery as gifts, many will have to be acquired by purchase. It is critical that sufficient financial resources be available when such occasions arise lest portraits of those Americans who must be represented in the national collection find a permanent home elsewhere.

Buildings and Facilities Management - The balance of the request is for staff and materials necessary to operate the historic building housing the Gallery. During FY 1974 and 1975 the Gallery has been preparing for the first public use of areas on the first and third floors of the building, adding 10,000 square feet of exhibition space. Two janitors are required to help maintain these areas on a seven-day a week basis and to accommodate the increased number of visitors expected during the Bicentennial celebration and following the opening of Metro. In addition, an electrician's helper is required to assist with the complex relighting necessary with each changing exhibit

(including meeting the special lighting requirements for a variety of associative materials which enhance exhibitions of portraiture); to support lectures, slide presentations and other special events; and to keep the electrical systems of the building in peak condition. The cost of these 3 positions is \$30,000. An additional amount of \$24,000 is required to purchase custodial materials in view of both increasing use of the building and inflated costs, and to purchase electrical supplies, paint, building materials, and shop tools and equipment so that the mechanical staff can maintain the building and fully support the expanded activities of the Gallery. A properly supplied staff can provide mechanical and custodial support for the Gallery at a considerable savings over the cost of contracting for such services.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

1974 Actual......\$1,326,000 1975 Estimate.....\$1,557,000 1976 Estimate.....\$1,625,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	83	0	83
11 Personnel Compensation	926	120	1,046
12 Personnel Benefits	80	10	90
21 Travel & Trans. of Persons	11	7	18
22 Transportation of Things	10	-5	5
23 Rent, Comm. & Utilities	13	-1	12
24 Printing and Reproduction	30	10	40
25 Other Services	207	18	225
26 Supplies and Materials	48	6	54
31 Equipment	230	-100	130
41 Grants	2	3	5
TOTAL	1,557	68	1,625
Analysis of Increase			
Necessary Pay		44	
Program Funds		24	

ABSTRACT - Since its opening in October 1974, the Hirshhorn Museum and Sculpture Garden (HMSG) is maintaining a full and balanced program of exhibitions, educational activities, research, curatorial and technical support including conservation, registration, and publication. Visitation for the first three months totaled over 640,000 persons. The FY 1976 budget requires an additional \$24,000 for buildings and facilities management services and supplies and \$44,000 for necessary pay for the present staff.

PROGRAM - The HMSG houses a magnificent gift to the Nation of outstanding modern paintings and sculpture. While the Hirshhorn collection forms the strong core of the Museum's holdings, a continuing program of new acquisitions by gift and purchase is being pursued. In addition, a lively program of temporary exhibitions utilizing loaned materials will enhance the breadth and depth of the Museum's offerings to the viewing public. For scholars, students, museum professionals, teachers, researchers, and art publishers, the HMSG will continue to be a major source of documentation and reference in the field of modern art.

After extensive planning and implementation, a full range of museum activities, including curatorial, conservation, registration, exhibitions, and loan activities were made available to the public immediately upon the Museum's opening on October 4, 1974. Through December over 640,000 persons visited the Museum and its Sculpture Garden. Estimated public service statistics are shown in the following table:

Е	stimated FY 1975	Estimated
_	(Oct-June)	FY 1976
Museum Attendance	1,200,000	1,800,000
Docent Tours Conducted	1,080	1,600
Attendance	28,800	40,000
Number of Lectures & Film Showings	176	264
Attendance	17,600	33,000
Number of Concerts (In coordination wi	th	•
Division of Performing Arts)	4	8
Major Exhibitions Scheduled	1	5
Major Exhibitions in Preparation	5	Q

JUSTIFICATION OF \$24,000 INCREASE (Buildings and Facilities Management) - The increase of \$24,000 in program funds is for supplies and materials \$6,000 and other contract services \$18,000. These funds cover contract services for cleaning and caring for carpets; regular cleaning of interior court windows; and lumber and paint supplies for carpentry and paint shop, essential for building repair and maintenance. The base for these activities in FY 1975, when the Museum was open to the public for only nine months, was \$28,000. Rising prices and higher annual costs as a result of heavy public use of the Museum justify this requested increase. Included within the overall object class distribution are funding adjustments reflecting: the annualization of costs of approved additional FY 1975 positions funded on a part-year basis in that year; additional travel requirements associated with the acquisition of art by gift or purchase and the development of loan and other exhibitions; and the anticipated higher costs of printing catalogues and other publications.

FREER GALLERY OF ART

1974 Actual......\$274,000 1975 Estimate.....\$410,000 1976 Estimate.....\$458,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	27	1	28
11 Personnel Compensation	343	24	367
12 Personnel Benefits	30	2	32
24 Printing and Reproduction	1		1
25 Other Services	15		15
26 Supplies and Materials	15	6	21
31 Equipment	6	16	22
TOTAL	410	48	458
Analysis of Increase			
Necessary Pay		15	
Program Funds		33	

ABSTRACT - The Freer Gallery of Art has a continuing program to search for and acquire Far and Near Eastern works of art of the highest quality and to conserve, study, and display these objects as keys to understanding the civilizations that produced them. For FY 1976 an additional 1 position and \$33,000 will be applied as follows: (1) Conservation - \$10,000 to purchase equipment for the study and preservation of art objects; (2) Collections Management and Exhibition - \$12,000 for supplies and equipment for the storage and exhibition of objects; and (3) General Administration - \$11,000 for a secretary and a temporary typist to meet a growing workload. An amount of \$15,000 is requested for necessary pay for current staff.

PROGRAM - The Freer Gallery of Art houses one of the world's most distinguished collections of Near and Far Eastern art. Included in the collections are over 12,000 works of art from China, Japan, Korea, India, and the Near East. The collection covers paintings, sculptures, and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold, and silver. Items not currently on exhibition and the library of 40,000 volumes are available to students and scholars and are used extensively.

Since the founding of the Freer Gallery, its goal has been to promote greater understanding of the cultures of the Near and the Far East through programs of research, exhibition, and education. The importance of that goal has assumed special significance during the past few years when cultural exchange between the United States and the countries of the Near and the Far East has greatly expanded.

The resumption of travel to the People's Republic of China and the opening of the Chinese Archaeological Exhibition in Washington, D. C. have resulted in an extraordinary reawakening of interest in Chinese culture. Near Eastern cultures are also receiving renewed attention. There has been a corresponding increase in requests for assistance from scholars, both at home and abroad, for docent service, for lectures, and for general information. The growing number of programs in the Freer auditorium necessitated the installation of new slide projectors and a completely new sound system. In addition, a new series of regularly scheduled Gallery tours has been introduced to supplement those tours made by appointment. These actions will continue to benefit visitors to the Gallery, especially the large numbers of visitors anticipated during the Bicentennial year.

A special Bicentennial exhibition, The Arts of Asia, scheduled to open in December, 1975, will focus on 18th century artifacts from the Near and the Far East. A second major exhibition, The Arts of the Arab World, will open in May, 1975. Many items included in these exhibitions have never been shown; all have been thoroughly examined by staff members of the Freer technical laboratory.

Several pieces of essential equipment have been installed in the technical laboratory. The most extensive addition was the specially constructed x-ray chamber that expedites and enlarges the research capacities of the laboratory. The x-ray chamber complements the activities of the regular photographic laboratory, which continues to provide photographs and slides of objects in the collection.

JUSTIFICATION OF \$33,000 INCREASE:

Conservation - The technical laboratory is the first major installation of its kind in the Smithsonian complex. With expansion of public awareness of Gallery facilities and interest in the areas covered by the collection, the demands on the laboratory have grown. There are many pieces of equipment urgently needed.

- --A 35mm camera is needed for photomicrography through a microscope acquired in FY 1973. The microscope is used for the investigation of the materials used in works of art and their deterioration, thus assisting the Gallery in carrying out its charge of protecting and doing research on the collection. Rapid and easy production of slides for research, educational, and training purposes would be possible.
- --The laboratory needs a special, low voltage x-ray unit to study ceramics, lacquer work, wood sculptures, paper, and silk. These would include oriental paintings, manuscripts, and prints; and etchings, lithographs, drawings, and other works in the collection of American art. The laboratory does not currently have the ability to radiograph such items satisfactorily.
- --The Gallery has a very sizeable collection of Whistler, Whistleriana, and other graphics that are much in need of treatment. A program has been launched to put all of these graphics into satisfactory condition, especially in view of the Bicentennial and plans for a major exhibition of American art from the collection in the Freer Gallery. A washing tank is necessary for such treatment.
- --Conservation treatment of many objects requires continued immersion of the object in water or other liquid controlled to a particular temperature. A temperature control unit is required.

An amount of \$10,000 is required for this conservation equipment.

Collections Management and Exhibition - To continue the program of Gallery maintenance and exhibition, it is necessary to purchase glass, hardware, lumber, and other equipment to be used in the construction of cases for exhibition and storage of the collection. As the collection grows the Freer Gallery of Art has the responsibility to see that objects are cared for and properly housed and exhibited. Prices on all such materials are rising. An amount of \$12,000 is required.

General Administration - The administrative workload has expanded tremendously in the past several years and continues to grow. This has been brought on by the growth of public interest in art, and more specifically in the areas encompassed by the Gallery's collections. With the coming of the Bicentennial year and the increased utilization of all Gallery facilities, it is urgent that a secretary be provided for the administrative officer. A temporary clerk-typist also will be needed in the summer months of peak public visitation and inquiry brought on by the anticipated influx of visitors during the Bicentennial. These two new jobs will cost \$11,000.

ARCHIVES OF AMERICAN ART

1974 Actual......\$238,000 1975 Estimate.....\$294,000 1976 Estimate.....\$337,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	12	4	16
11 Personnel Compensation	219	32	251
12 Personnel Benefits	19	2	21
21 Travel & Trans. of Persons	3	2	5
22 Transportation of Things	5		5
23 Rent, Comm. & Utilities	24	7	31
24 Printing and Reproduction	12		12
25 Other Services	4		4
26 Supplies and Materials	4		4
31 Equipment	4		4
TOTAL	294	43	337
Analysis of Increase			
Necessary Pay		5	
Program Funds		38	

ABSTRACT - The Archives of American Art (AAA) is a Smithsonian facility serving academic, museum, and other scholarly interests. It preserves and makes available to students and historians the documentary resources required for research and publication on American art. An FY 1976 increase of 4 positions and \$38,000 is sought to improve the AAA in two areas: (1) Archives - 4 positions and \$31,000 for increased processing capability in the Washington center to prevent further backlogging of unprocessed and unfilmed work, and for travel funds; and (2) Buildings and Facilities Management - \$7,000 to meet new rent costs. An additional amount of \$5,000 is requested for necessary pay for existing staff.

PROGRAM - The AAA assembles and preserves the personal and official records of artists, dealers, critics and art organizations and thereby encourages scholarship by giving researchers access to the primary documentation they need. These collections of papers, which range in time from the 18th century to the present and cover the entire United States, are sought out, organized, catalogued, microfilmed, and made available to qualified scholars. Several million items are now at hand in the form of letters, journals, sketchbooks, business papers, photographs, and scarce publications. New collections are constantly being received. This material is intensively used by staff and fellows from Smithsonian museums as well as by graduate students, art historians, and curators across the country. In the past few years several hundred completed books, articles, catalogues, and dissertations have acknowledged the AAA as a source of information.

The processing and chief reference center of the Archives is located in Washington, with centers in Boston, New York, Detroit and San Francisco. Each office is responsible for acquiring further collections of papers and for administering complete sets of microfilm containing all documents offered by the Archives.

The Archives also has an important oral history program, begun in 1959, comprising today more than fourteen hundred transcripts of interviews with artists, dealers, collectors, and administrators. This program is subsidized by private funds, a part of them in the form of foundation grants generated by the Archives. Private

funds are also used for the publication of Archives of American Art Journal, a quarterly periodical based on and publicizing Archives resources. The Archives anticipates income from private funds of about \$150,000 in FY 1975.

JUSTIFICATION OF \$38,000 INCREASE:

Archives - The FY 1975 appropriation has permitted initial progress in sorting and filming over 700 collections of papers acquired in previous years which had accumulated in the processing center in Washington. An additional microfilm camera was purchased, one full-time position (archives technician) was added, and two 700-hour appointments were used for processing and preparing a checklist of these collections. During FY 1976, this archives technician and renewed 700-hour appointments will continue their work of preparing the backlog of previously acquired materials for research use.

For FY 1976, the Archives requests funds and positions to prevent the increasing amount of new materials being received from becoming similarly backlogged and unavailable to scholars on a timely basis. In FY 1973 and 1974, over 100 collections of papers were acquired annually. By contrast, in just the first six months of FY 1975, over 120 new collections have been received. With four regional offices now in full operation and pursuing further important collections, a similar increase for FY 1976 can be anticipated. To cope adequately with these new materials, the Archives requests that its current staff of six archives aides be increased by an additional four for \$29,000.

The collection of this unique documentary material on American art requires Area Directors to travel, seeking out on a wide regional basis the living artists, relatives, and associates of deceased artists who have in their possession papers and other material needed by scholars. To pursue this basic collecting activity, the Archives requires an increase of \$2,000 in travel funds for FY 1976.

Building and Facilities Management - The Archives regional offices are experiencing cost inflation in their support activities. The Boston office, formerly rentfree, is now being charged a rental fee to offset heating and maintenance expenses. The New York office rent will again be raised this year. The cost of communications has been increased already this year. An increase of \$7,000 is required to offset this support problem in the regional offices.

COOPER-HEWITT MUSEUM OF DECORATIVE ARTS AND DESIGN

1974 Actual......\$174,000 1975 Estimate.....\$209,000 1976 Estimate.....\$293,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	11	5	16
11 Personnel Compensation	160	43	203
12 Personnel Benefits	14	3	17
21 Travel & Trans. of Persons	1	1	2
23 Rent, Comm. & Utilities	30	20	50
26 Supplies and Materials	4	17	21
TOTAL	209	84	293
Analysis of Increase			
Necessary Pay		4	
Program Funds		8.0	

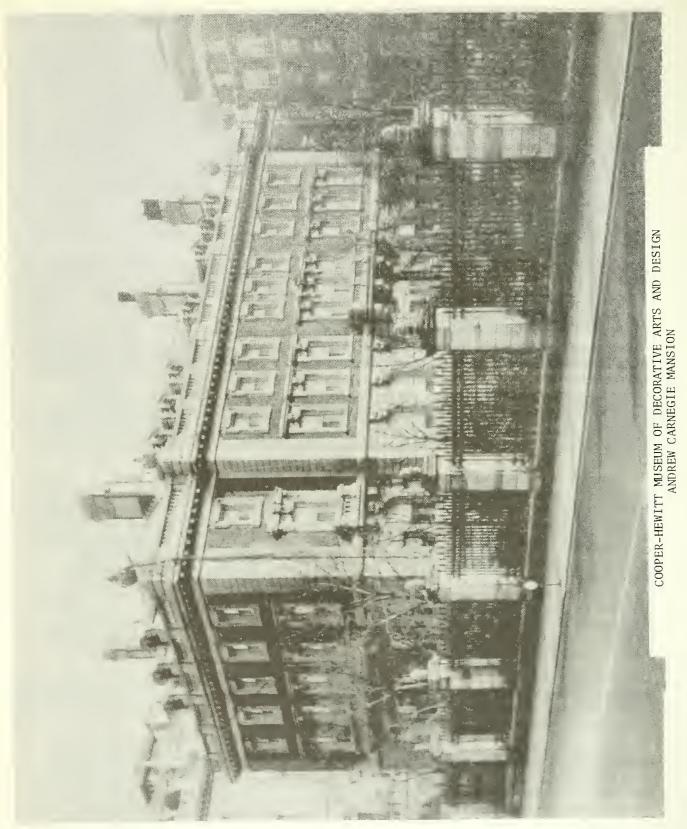
ABSTRACT - The Cooper-Hewitt Museum of Decorative Arts and Design is one of the world's most distinguished repositories of decorative arts and design. The collection currently numbers over 100,000 objects ranging from textiles, drawings, wallpaper, furniture, and jewelry to glass, ceramics, and silver. In FY 1976 an increase of 5 positions and \$80,000 is sought for Building and Facilities Management and related supplies. Necessary pay in the amount of \$4,000 is sought for existing staff. Under the heading "Office of Protection Services" funds are sought for the Cooper-Hewitt protection force.

PROGRAM - The Cooper-Hewitt Museum is the only museum in the United States devoted exclusively to the study of historical and contemporary design. The collections currently span 3,000 years and include over 100,000 objects. Its textile collection is internationally known, its drawing collection is the largest in the United States, and its wallpaper collection is the largest in the world. In addition, the Museum contains fine examples of furniture, glass, ceramics, silver, metalwork, lighting fixtures, jewelry, and other decorative objects. In recent years categories of architecture, urban planning, and industrial design have been added. The collection is supported by one of the finest and most complete decorative arts and design libraries in the country. The library encompasses a reference library, a rare book library (25,000 volumes), picture archives of over 1 1/2 million items, and special archives on color and light, patterns, materials, symbols, sensory and technological data, interiors, advertising, design theses and typography.

In 1965, the Board of Regents of the Smithsonian Institution authorized the Secretary to negotiate with the Trustees of the Cooper Union for the transfer to the Smithsonian of the collections of the Cooper Union Museum in New York City. An agreement for the transfer of the Museum was subsequently signed on October 9, 1967.

In the years since acquiring these great decorative arts and design collections, the Smithsonian has sought to solve three closely related problems with respect to the operation of the Cooper-Hewitt Museum. The first of these was to define the scope of the program for the new museum. The second was to locate a suitable home in New York City. The third was to raise funds, both for operations and for necessary construction.

The Museum was originally intended by its founders, the Misses Sarah, Eleanor, and Amy Hewitt (granddaughters of Peter Cooper) to be a resource for students and practitioners of design. It was to serve as a repository of information about, and



examples of, design of all sorts through the ages. They intended that it should be an active institution and that all its collections should be easily accessible to professionals in the field of design as well as to the general public. By the time the Smithsonian acquired the Museum, however, much of this original vision had been lost and the Museum had tended to become a rather rarefied collection of decorative art objects appealing primarily to a small number of connoisseurs.

The scope of the program has been redefined. After a number of conferences and discussions including the Museum staff and other Smithsonian staff, it was agreed that the Cooper-Hewitt Museum should revert to its origin and become a national museum of design. Building upon its excellent collections, and particularly upon its unequalled archives of illustrative materials, the Museum intends to make use of appropriate modern technology—including computers, holography, and other forms of data storage and retrieval—to achieve this objective. This renewed determination to serve society by serving the design profession in the broadest sense is in keeping with the traditions of the Museum and of the Smithsonian.

Concurrent with program development, the Institution was also engaged in a search for suitable quarters for the Museum in New York City. On January 27, 1972, the Carnegie Corporation of New York gave the Regents of the Smithsonian the Andrew Carnegie Mansion, the adjoining Miller House, and the grounds comprising the entire block from 90th to 91st Streets on Fifth Avenue. The Smithsonian engaged an architectural firm to prepare a master plan for the ultimate use of the entire property, as well as a phased plan for the remodeling of the Carnegie Mansion to permit its use as a museum. In August 1974, the Institution signed a contract financed by \$1,150,000 in private funds for the first phase of reconstruction of the Mansion. This contract will finish the public exhibition areas (with the exception of floor coverings); install necessary heating, ventilating, and air-conditioning equipment; create the shaft for a new elevator; complete one of the study floors; and do necessary work in the nonpublic spaces in the basement. estimated that additional private funds in the order of \$200,000 will be required to finish all work required for public museum use. The first phase of the renovation program is projected to be completed in December 1975, followed by a public opening in 1976. A picture of the Cooper-Hewitt Museum is shown on page A-54,

Fund raising for the Cooper-Hewitt has been a continuing preoccupation of both the Museum and the Smithsonian and has produced impressive results. In the period 1969-1974, more than \$1,100,000 (including interest) has been raised from private donors, corporations, foundations, and other organizations to meet operating expenses. This was in addition to the funds raised for renovation. Furthermore, the Museum has received \$400,000 to meet the costs of an opening exhibition in its new quarters.

As far as Federal funds are concerned, the Smithsonian adopted the principle that the programs of the Cooper-Hewitt should be operated with non-appropriated funds, and that appropriated funds should insofar as possible be limited to the protection and preservation of collections and property. Over the past three years, support funds appropriated for such purposes have permitted maintenance of a minimal program at the Cooper-Hewitt, in anticipation of its reopening as a fully operating museum. In FY 1973, the Smithsonian received 9 positions and \$85,000 for the Cooper-Hewitt Museum. These positions, requested as part of the Buildings Management Department, were for guards, custodians, and mechanics. In FY 1974, as a part of a general reorganization these positions and the dollars now related to them were transferred directly to Cooper-Hewitt. Made available at the same time were positions and dollars to assist in administration and registration. The 11 positions currently at Cooper-Hewitt are for 3 administrative, 2 registration, and 6 buildings and facilities management staff. In addition, the Smithsonian Institution Libraries provides routine library assistance to the Cooper-Hewitt from its resources. It is intended that Federal expenditures will continue to be limited to the purposes stated above.

During the last year, objects from the collection were included in exhibitions at twenty-three institutions including the Metropolitan Museum, National Gallery of Art, Baltimore Museum, and the Art Institute of Chicago. The Museum organized a major exhibition of drawings, textiles, and wallpapers entitled "The Art of Decoration,"

which opened at the Victoria and Albert Museum in London and was later shown at the Brooklyn Museum. An exhibition of Winslow Homer watercolors and drawings from the Cooper-Hewitt collection travelled to London following its showing at Columbia Museum of Art and the Telfair Academy. In addition, benefit exhibitions of paintings by Thomas Moran and Frederic Church were held in leading New York galleries. Work on ten further exhibitions is currently in progress.

JUSTIFICATION OF \$80,000 INCREASE (Buildings and Facilities Management) - The Cooper-Hewitt Museum, when it re-opens in 1976, will be open to the public six days a week with expected attendance of 250,000 visitors per year. The Museum in its present closed down state has a maintenance and trade staff of 5. It is proposed that this staff be increased to 10 to provide adequate care for the 20,000 square feet of public space, 12,000 square feet of semi-public study and library space, and 46,000 square feet of garden. This increase of 5 positions and related funds for supplies and materials would provide a minimum work force to maintain the property at minimum acceptable standards. The indoor space includes parquet floors, boiserie, and ornamental plaster ceilings which present special maintenance problems. The garden will include flower beds, trees and bushes, grass and gravel which must be kept in order throughout the year.

OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC SERVICE

1974 Actual.....\$181,000 1975 Estimate....\$209,000 1976 Estimate....\$215,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	10	0	10
11 Personnel Compensation	180	6	186
12 Personnel Benefits	15		15
21 Travel & Trans. of Persons	4		4
25 Other Services	4		4
26 Supplies and Materials	3		3
31 Equipment	3		3
TOTAL	209	6	215
Analysis of Increase			
Necessary Pay		6	
Program Funds		0	

ABSTRACT - The Office of the Assistant Secretary for Public Service guides and supports the public service units in the development of programs to advance the Institution's objectives in education and information. No program increase is requested for FY 1976. Funds in the amount of \$6,000 are sought for necessary pay.

PROGRAM - The primary functions of the Office of Public Service are to stimulate, to coordinate, and to supervise the steadily increasing activities of the Smithsonian's educational and public service components. These include the unique experimental efforts of the Anacostia Neighborhood Museum; the many-faceted work of the Division of Performing Arts in synthesizing and presenting to the American public across the nation the historical and continuing development of the American aesthetic experience; the programs of the Office of Elementary and Secondary Education to make the Smithsonian's facilities and collections accessible and pertinent to visiting school children; the development of interdisciplinary symposia and seminars to enable leading scholars and specialists from the world community to examine themes of common concern conducted by the Office of Smithsonian Symposia and Seminars; the dissemination of Smithsonian research and interests through the Smithsonian Press and the Smithsonian Magazine; the organization and conduct of meaningful adult and teenage educational presentations by the Smithsonian Associates; and an active public affairs operation including production of a commercial television series and audiovisual educational materials, dedicated to keeping Americans currently informed of the educational programs and exhibits available to them at or through the facilities of the Smithsonian Institution.

ANACOSTIA NEIGHBORHOOD MUSEUM

1974 Actual......\$317,000 1975 Estimate.....\$423,000 1976 Estimate.....\$469,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	19	2	21
11 Personnel Compensation	266	33	299
12 Personnel Benefits	23	3	26
21 Travel & Trans. of Persons	2		2
23 Rent, Comm. & Utilities	47		47
24 Printing and Reproduction	21		21
25 Other Services	36		36
26 Supplies and Materials	23	10	33
31 Equipment	5		5
TOTAL	423	46	469
Analysis of Increase			
Necessary Pay		11	
Program Funds		35	

ABSTRACT - The Anacostia Neighborhood Museum provides a personal and educational museum experience for audiences unaware of or unaffected by major museum resources. An increase of \$35,000 is requested in FY 1976 to meet the following program requirements: (1) Exhibitions - an exhibits specialist (\$13,000) and an additional amount of \$10,000 for exhibits supplies and materials such as masonite, lumber, plexiglass, and photographic supplies to expand exhibit production capability and assist in production of Bicentennial-related exhibits and (2) Buildings and Facilities Management - a general maintenance worker (\$12,000) to establish at the Museum the capability for proper and efficient repair and maintenance of an expanding number of facilities. An additional amount of \$11,000 is also being sought for necessary pay.

PROGRAM - The Anacostia Neighborhood Museum (ANM) was established to reach out to new audiences who are unaware of museum resources, physically too far from them, or, as inhabitants of low-income population density centers, do not see the interest or relevance of museums. By linking its research, exhibits, and education directly to the needs of the community, the ANM has assured a fresh, nontraditional approach to the role of the museum. The Museum is a combination of many things. It serves as a meeting place, a performing arts center, a recreation facility, and an arts and crafts workshop. It offers learning experiences through changing exhibits on subjects relevant to the community. Two major exhibits to be produced in FY 1975 are: "The Message Makers," an indepth survey of the communications media and its effects on the lives of black people, and "East Bank Anacostia," an art exhibition featuring artists in Anacostia and Northeast Washington.

In addition to educational opportunities offered at the Museum itself, such as guided tours of museum exhibits and various workshops, demonstrations, and seminars, the Museum also has developed educational resources that are available to schools, churches, and community organizations on a loan basis. These resources, which focus on urban concerns and the history and culture of people of African descent, include portable exhibits, speakers, demonstrations, and small educational kits.

JUSTIFICATION OF \$35,000 INCREASE:

Exhibitions - Since its establishment, the Museum has developed a small but effective exhibits program. There is currently a staff of four responsible for the design, production, and installation of exhibits in the Museum. While the exhibits produced by this staff have received much recognition and acclaim, both from within and outside the community, their numbers have been limited. Two recent developments have provided the opportunity to increase both the number of exhibits and the audiences to whom they are presented. One of these developments involves the newly completed exhibits design and production laboratory, which, in addition to serving, with foundation fund support, as a facility for training minority museum technicians, will also provide much needed space and equipment for exhibits design and production. Furthermore, with funds requested under the Bicentennial heading, three special Bicentennial exhibits will be produced. These Bicentennial exhibits will be displayed at the Museum and will be circulated throughout the country in the form of traveling exhibits. With the new availability of space and the impetus of the Bicentennial effort, the Museum has an opportunity as well as an immediate need to increase its exhibit production capability. An increase of one position, an exhibits specialist, (\$13,000), and \$10,000 for support costs of exhibit supplies and materials are requested.

Buildings and Facilities Management - The ANM has never had a full-time general maintenance worker to provide day-to-day maintenance and repair services. With the completion and use of the new exhibits design and production laboratory, Anacostia personnel will be located at three different facilities, further emphasizing the need for a carefully developed and applied program of facility upkeep. One position and \$12,000 are requested to assure proper maintenance and repair of these facilities, including, when necessary, the refurbishment of office furniture and the repair of minor office machines.

INTERNATIONAL EXCHANGE SERVICE

1974	Actual\$175,000
1975	Estimate\$187,000
1976	Estimate\$212,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est.
(bollars in chousands)	11 19/3	Requested	FY 1976
Number of Permanent Positions	9		9
11 Personnel Compensation	119	5	124
12 Personnel Benefits	10		10
22 Transportation of Things	50	20	70
26 Supplies and Materials	7		7
31 Equipment	1		1
TOTAL	187	25	212
Analysis of Increase			
Necessary Pay		5	
Other Uncontrollable		20	
Program Funds		0	

ABSTRACT - Through the International Exchange Service, public and private institutions in the United States exchange publications with organizations in other countries. This includes the exchange of the offical United States publications, including the daily issues of the Federal Register and the Congressional Record, the weekly issues of the U.S. Patent Specifications, as well as private publications such as medical and dental texts. No program increase is sought for FY 1976. Funds in the amount of \$5,000 are requested for necessary pay for existing staff. Also \$20,000 for shipping rate increases is requested in the Uncontrollable Section.

PROGRAM - In 1849, the Smithsonian Institution established a system for the exchange of Smithsonian publications with the learned societies of other countries. This program was so successful that later it was expanded to other American organizations. The Exchange's responsibilities were formalized when the Brussels Convention of 1886 was adopted by the United States, and the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific, and cultural publications. In addition, a Resolution to provide for the Exchange of certain Public Documents (14 Stat. 573, as amended) provides that the exchange of the official United States publications shall be made through the Smithsonian Institution. In FY 1974, approximately 2.5 million publications were transmitted to over 100 countries for exchange documents.

DIVISION OF PERFORMING ARTS

1974	Actual	\$422,000
1975	Estimate	\$371,000
1976	Estimate	\$402,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	10	1	11
11 Personnel Compensation	233	25	258
12 Personnel Benefits	20	3	23
21 Travel & Trans. of Persons	16		16
22 Transportation of Things	2		2
23 Rent, Comm., & Utilities	2		2
24 Printing & Reproduction	4	1	5
25 Other Services	78	1	79
26 Supplies and Materials	12		12
31 Equipment	4	1	5
TOTAL	371	31	402
Analysis of Increase			
Necessary Pay		8	
Program Funds		23	

ABSTRACT - The Division of Performing Arts (DPA) has primary responsibility for the production and presentation of all live performance events of the Smithsonian Institution and its museums, with an emphasis on programs that relate to and enhance museum collections and that deal with our national aesthetic expressions. The FY 1976 budget seeks an increase of 1 position (\$20,000) with support funds of \$3,000 to establish an eductional program. Funds (\$8,000) are also sought for necessary pay costs.

PROGRAM - DPA is the primary planning, producing, and supervising organization in the Smithsonian for all public performances. Its Federal appropriation provides for central administration and direction and funds for some program development with most of its activities produced with other appropriated and non-appropriated funds. Annually. it presents the Festival of American Folklife, which has become the largest summertime event in the Nation's Capital, and a number of special series and individual events during the winter months. During the 1973-1974 season, some 15,000 people attended concerts offering a range of creative musical expressions from baroque to bluegrass and jazz. Most concerts were preceded by free public workshops. A new recording program instituted by the division issued a historic first, the Smithsonian Collection of Classic Jazz, a boxed, six-record set including 85 selections from 17 record companies. Receiving critical acclaim, the Collection has now had several printings. The Smithsonian Resident Puppet Theater, one of two continuously operated puppet theaters in the country, attracts several thousand visitors each week to its shows. The carousel and an original old-time popcorn machine contribute to a lively mall. Performing Arts shares the American experience in its many creative forms with people across the nation through the Touring Performance Service, offering performances not available through commercial management to museums, colleges, universities, and cultural centers. The 1973-1974 season saw 51 performances in 23 states. Some one million persons were attracted to the 1973 and 1974 Festivals of American Folklife featuring a new site, the Mall's Reflecting Pool, an expanded schedule, and new themes leading to a season-long Bicentennial Festival in 1976. The Smithsonian is joined by the National Park Service as a co-sponsor.

In an effort to accommodate a program of such magnitude, the Division has narrowed its focus in other areas, and re-directed efforts and funding. Programs curtailed or transferred to other organizations include the American College Theatre Festival, the Indian Awareness program, and some of the Mall-based programs. Programs retained and in

some instances augmented by this review include the Division's Jazz series, which is now directing an oral history of jazz in cooperation with the National Endowment for the Arts, and an organized tour program of foreign folk performers in 48 or more appearances throughout the United States in cooperation with the American Revolution Bicentennial Administration.

JUSTIFICATION OF \$23,000 INCREASE (Education and Public Orientation) - The DPA has a responsibility to educate the attending public to the nature of these performing events and their relationship to the museums of the Institution. The need for a unified, thoughtful, well-planned educational program is strong, but the Division has been able to provide only minimal service. Requests for assistance from other museums, educational institutions, and other interested organizations go largely unanswered due to lack of staff and an adequate educational program. Availability of information to the public on the Division's activities is sporadic and insufficient. The need to unify the outdoor Festival of American Folklife, particularly the Bicentennial event, with the collections indoors at the Museums has long been recognized; but without planning, thought, and production, this need has been poorly met. The FY 1976 budget attempts to rectify the situation with the establishment of an education specialist (\$20,000) with \$3,000 of program funds. This position would serve as a focal point for an educational program relating all Divisional presentations--Jazz, winter programs, Folklife Festival, and Bicentennial Festival -- to each other and to the Smithsonian Institution's museums and collections.

OFFICE OF PUBLIC AFFAIRS

1974 Actual......\$396,000 1975 Estimate.....\$307,000 1976 Estimate.....\$317,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	15	0	15
11 Personnel Compensation	223	9	232
12 Personnel Benefits	19	1	20
21 Travel & Trans. of Persons	1		1
24 Printing and Reproduction	52		52
25 Other Services	9		9
26 Supplies and Materials	1		1
31 Equipment	2		2
TOTAL	307	10	317
Analysis of Increase			
Necessary Pay		10	
Program Funds		0	

ABSTRACT - The Office of Public Affairs is responsible for communication of information about the Smithsonian and its programs to the public through various media--radio, television, newspapers, popular and scientific periodicals, press releases, documentary films, and general information and visitor orientation pamphlets and other items. No additional program funds are requested in FY 1976. Necessary pay in the amount of \$10,000 is sought for current staff.

PROGRAM - The Office of Public Affairs serves millions of museum and gallery visitors annually, as well as the general public, through the communication of factual and educational data about the Smithsonian and its programs. A wide array of communications media is used: radio, television, newspapers, popular and scientific periodicals, press releases, documentary films, the Smithsonian Calendar of Events, Dial-A-Phenomena, Dial-A-Museum, and general information pamphlets and publications. Included in its presentations are the Torch newspaper, Research Reports, and the "Radio Smithsonian." The Office of Public Affairs also administers the Office of Special Events, which assists with exhibition openings, eminars, meetings, and special activities held in Smithsonian facilities in Washington, D.C.

In FY 1974 and continuing in FY 1975, the Smithsonian has been working with a television producer to bring to commercial television a series on the Smithsonian. The first special "MONSTERS: Mysteries or Myth" was aired December 1974. The documentary made especially for television had the highest rating for such a film ever shown, a Nielson rating of 31.2 which means 44 percent of the television viewing audience was watching this show. The second special "Flight: The Sky's the Limit" was shown in late January. The third in the series is to tell the story of the Hope Diamond, now part of the Smithsonian's collections.

SMITHSONIAN INSTITUTION PRESS

1974 Actual.....\$800,000 1975 Estimate....\$605,000 1976 Estimate....\$621,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	27	0	27
11 Personnel Compensation	496	15	511
12 Personnel Benefits	43	1	44
21 Travel & Trans. of Persons	2		2
24 Printing and Reproduction	55		55
25 Other Services	4		4
26 Supplies and Materials	3		3
31 Equipment	2		2
TOTAL	605	16	621
Analysis of Increase			
Necessary Pay		16	
Program Funds		0	

ABSTRACT - The Smithsonian Institution Press is responsible for the editing, design, production, and distribution of printed material produced by historians, scientists, and curators. Included in this work are multi-volume monographs, eight scientific series, exhibit catalogues for the several museums, education pamphlets, and information leaflets. No additional program funds are requested in the FY 1976 budget. Funds in the amount of \$16,000 are sought for necessary pay.

PROGRAM - Press publication activity is a fundamental extension of the work of the Smithsonian's basic research laboratories. Necessary for ecological and agricultural advancement and other basic and applied studies by researchers, these reports are distributed to major libraries and scientific institutions in all 50 states and many foreign countries. The Press edits manuscripts and issues contracts for the printing of exhibit catalogues, education pamphlets, and informative leaflets for the many millions of visitors to the Smithsonian each year. The Press reviews each manuscript submission for editorial content and completeness, quality of typing, illustrations, etc. before acceptance. Inadequately prepared manuscripts (i.e. those that would be too costly to edit or manufacture) are not accepted for publication. Finally, the Press furnishes the Institution with a variety of necessary manuals, reports, and directories, including copies of Congressional materials and reports from Government agencies.

In FY 1975, most of the printing funds (except for those used for certain Institution-wide publications, such as the <u>Smithsonian Year</u>) that previously had been spent directly by the Press for the printing of bureau and office research reports and exhibit catalogues were allocated directly among those units. This will result in each such unit paying for its own printing. Resulting benefits include (1) each unit establishing the priorities for its manuscripts to be printed and (2) printing costs being shown as a function of program activity. Since the legal authority to purchase printing with Federal funds rests with the Press, it will continue to process printing requisitions.

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUM PROGRAMS

AND

OFFICE OF MUSEUM PROGRAMS

1974 Actual......\$ 494,000 1975 Estimate.....\$ 935,000 1976 Estimate.....\$1,005,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	63	1	64
11 Personnel Compensation	719	54	773
12 Personnel Benefits	62	5	67
21 Travel & Trans. of Persons	12		12
22 Transportation of Things	2		2
23 Rent, Comm. & Utilities	7		7
24 Printing and Reproduction	12		12
25 Other Services	78	3	81
26 Supplies and Materials	19	5	24
31 Equipment	24	3	27
TOTAL	935	70	1,005
Analysis of Increase			
Necessary Pay		46	
Program Funds		24	

ABSTRACT - The Assistant Secretary for Museum Programs oversees and reviews the Institution's museum and exhibition activities, with special emphasis on developing exhibits, surveying visitor reactions to the Institution's services, assessing the effectiveness of educational programs, and providing advice, technical assistance, and documentary resources to other museums.

The South Group Buildings Manager, now under the Office of Museum Programs, has the responsibility for custodial maintenance of the Arts and Industries Building, the Smithsonian Institution Building, and the temporary Air and Space Building.

An increase of one position and \$24,000 is requested for Building and Facilities Management - an electrician (\$13,000) and funds for related custodial services, supplies and materials, and equipment. An additional amount of \$46,000 is being sought for necessary pay for the entire office.

PROGRAM - I. Assistant Secretary for Museum Programs - With 18 positions and \$378,000 the Office of the Assistant Secretary for Museum Programs administers, oversees, and reviews the Office of Museum Programs, Office of the Registrar, Conservation-Analytical Laboratory, Office of Exhibits Central, Smithsonian Institution Archives, National Museum Act, Smithsonian Institution Libraries, Smithsonian Institution Traveling Exhibition Service, and the South Group Buildings Manager. In addition, this office works with museum professionals and their associations and organizations to increase the effectiveness of museums in the performance of their scholarly and public education functions. The Office of Museum Programs is an aggregate of programs responsible for the coordination of activities related to training in museology and museography and the development of new techniques related to museum administration and practices. Presently, the Office maintains three major programs—the Museum Workshop Program, the Conservation Information Program, and the Psychological Studies Program.

The Museum Workshop Program offers workshops, seminars, and training courses to any individual gainfully employed by a museum. Each workshop, taught by Smithsonian staff, is devoted to specific methods or problems. Enrollment is limited, and

instructors try to concentrate on the particular needs of each participant. Special attention is usually given to the problems of the small museum's budget, services, and facilities. In 1975 approximately 16 three-day to one-week workshops will be offered. Subjects include: financial management, the training of docents, and insurance. Special attention will be given to the needs of minorities, particularly American Indian communities which have museum or museum-related facilities but face a serious shortage of trained personnel.

The Conservation Information Program is designed to make the knowledge and facilities of the Smithsonian accessible to as large an audience as possible. The program acquaints small museums, interested organizations, and individuals with selected theoretical and practical principles currently practiced in the field of museum conservation. This information—in the form of video-taped programs and slide lectures accompanied by tape commentaries—is lent, free of charge, to all who request it. To date, the Conservation Information Program, in cooperation with the Smithsonian Institution Conservation—Analytical Laboratory, has produced 4 slide presentations on the curatorial care of objects, and 10 more are being prepared during the next year. Some selected subjects include: dry methods in the cleaning of prints, drawings, and manuscripts; proper mounting and matting of drawings and manuscripts; proper mounting and matting of paper; the protective lining of a wooden storage drawer for textiles and costumes; and the wet cleaning of antique cotton, linen and wool.

The Psychological Studies Program studies the effectiveness of exhibits and visitor reaction to them. Types of studies include basic research on museums as learning and teaching environments; the evaluation and effectiveness of various exhibition techniques, including assessment of push-button devices and audio-visual adjuncts; the effect of noise and crowds on visitor comprehension; and problems of orientation. A major monograph, The Measurement and Facilitation of Learning in the Museum Environment, was published in FY 1975, and at least two other studies are expected to be completed in FY 1976.

II. South Group Buildings Manager - With 45 positions and \$557,000 in FY 1975, the South Group Buildings Manager's office plans and supervises the cleaning, maintenance, and servicing of occupants in primarily the Smithsonian Institution and Arts and Industries Buildings. This involves the daily cleaning of all office, exhibition, and laboratory space; moving services as renovation work on the Arts and Industries Building progresses and offices must be relocated to make way for planned construction; and the transportation of objects or equipment as required.

JUSTIFICATION OF \$24,000 INCREASE (Buildings and Facilities Management) - When the renovation of the Arts and Industries Building is completed, four major exhibition halls will be reopened to the public. In recent years exhibition space in this building has been put to other uses. With the installation of the 1876-Centennial Exhibition this building will once again become a major public museum. One electrician (\$13,000) and \$11,000 for custodial services, supplies and materials, and equipment are requested to help maintain the reopened building.

OFFICE OF THE REGISTRAR

1974 Actual......\$231,000 1975 Estimate.....\$202,000 1976 Estimate.....\$212,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	16	0	16
11 Personnel Compensation	147	9	156
12 Personnel Benefits	12	1	13
21 Travel & Trans. of Persons	1		1
25 Other Services	3		3
26 Supplies and Materials	6		6
31 Equipment	33		33
TOTAL	202	10	212
Analysis of Increase			
Necessary Pay		10	
Program Funds		0	

ABSTRACT - Since the 1880's, the Office of the Registrar has served as the Registrar for the National Museum of Natural History (NMNH) and the National Museum of History and Technology (NMHT). Registration at the Smithsonian is undergoing modernization and decentralization. The Central Registrar will guide decentralization and provide continuing assistance to all bureaus in modernization of registration systems. No program increase is sought for FY 1976. Necessary pay in the amount of \$10,000 is sought for existing staff.

PROGRAM - This Office was established in the 1880's to handle the traditional tasks of shipping and documenting accessions primarily for the NMNH and NMHT collections. Registration at the Smithsonian is now undergoing modernization, rationalization, and decentralization. Modernization includes streamlining of manual systems for control of the National Collections, and computer applications where useful and efficient. Rationalization includes removal of extraneous functions from the Central Registrar's Office; mail services were transferred to the Office of Plant Services in FY 1974 and public inquiry was transferred to the Office of Public Affairs in FY 1975. Decentralization is aimed at giving each museum or gallery its own registration capability, a necessity for effective registration given the diversity of collections and activities of these bureaus. This Office will be retained as a Central Registrar to guide decentralization, provide continuing assistance to bureaus in modernization of their systems, and, most important, to guide development of a Smithsonian-wide information system for effective intellectual integration of the National Collections.

From a total FY 1975 budget of \$202,000, \$95,000 is projected for operation of the Central Office and the balance will be made available to NMHT and NMNH for their continued registration/shipping functions. Decentralization should be completed physically and organizationally during FY 1975, but modernization of registration systems and creation of effective information systems is an on-going project. The result of this program will be registration services much more responsive to bureau needs, and a vastly improved information system at the Institutional level.

During FY 1974, the Central Registrar continued to act as registrar for the NMHT and NMNH; the office handled a total of 1,627 new accessions (598,628 specimens) in NMNH and 764 new accessions (116,556 items) in NMHT. The Central Registrar also continued to administer shipping transactions for most Smithsonian bureaus, as well as the public inquiry function.

CONSERVATION-ANALYTICAL LABORATORY

1974 Actual......\$319,000 1975 Estimate.....\$561,000 1976 Estimate.....\$606,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	21	2	23
11 Personnel Compensation	321	41	362
12 Personnel Benefits	27	4	31
21 Travel & Trans. of Persons	10		10
23 Rent, Comm. & Utilities	1		1
25 Other Services	20		20
26 Supplies & Materials	12		12
31 Equipment	170		170
TOTAL	561	45	606
Analysis of Increase			
Necessary Pay		13	
Program Funds		32	

ABSTRACT - The Conservation-Analytical Laboratory (CAL) advises on the suitability of buildings' environmental conditions for objects displayed or stored. It examines and treats objects for their protection and preservation, analyzes objects for basic research data of interest to scientists and historians, and conducts training programs in association with Conservation Information Programs. The FY 1976 budget proposes an increase of \$32,000 for 2 new positions and program funds to continue the phased development of the Laboratory's capability to respond to the conservation needs and analysis and treatment of objects. An amount of \$13,000 is requested for necessary pay for current staff.

PROGRAM - The Conservation-Analytical Laboratory was established in 1963 to serve the museums of the Smithsonian Institution. Staffed by conservators and scientists, it ascertains and advises on the suitability, for artifacts displayed or in storage, of environmental conditions found in the buildings and suggests remedial action if necessary. Based upon examination or analysis, advice is given to curatorial units on conservation procedures for specific objects. Objects which cannot be treated locally, which present special problems, or require more specialized equipment than is available in these units, are treated in this central laboratory.

Analyses of objects or their materials (e.g. pigments, fibers, alloys, or corrosion products) by advanced instrumentation serve to determine appropriate conservation procedures or to provide museum archaeologists and historians with basic research data concerned with dates, attribution, and ancient production methods. Commercial products proposed for prolonged contact with artifacts (or fumigants used in storage) are examined for suitability.

To improve services to the bureaus, the Laboratory has purchased extensive equipment including: thermoluminescent dating equipment which will be used to date ceramics; a memory board for the dedicated Nova 1012 Computer which extends its capability to do analytical computations; and a videotype word-processor to increase output from a single typing position.

For conservation or other staff in the bureaus there are regular lectures. Technical information on specific subjects is made available as audio tapes and tape-slide lectures through Conservation Information Programs.

JUSTIFICATION OF \$32,000 INCREASE (Conservation) - Museums serve a unique role in that they are the primary guardians of the evidence of man's cultural development from the earliest times onward. Museum collections, including artifacts, specimens, and works of art, are primary resources in the functions of exhibit display and research. Museums must be able to transmit to future generations the heritage which previous civilizations have left. For a substantial part of the objects in museum collections this is not likely to occur if greater attention is not given to the needs of conservation. Every material ages and that age brings disintegration. During the last millenia the external factors accelerating this process of decay have been virtually entirely natural in their causes. But over the last century and a half, man has contributed and accelerated this process with the increasing pollution of his urban and industrial society. As a result, objects which under different conditions could have remained sound for decades, or even centuries, are now crumbling. Conservation of the collections requires constant attention to environmental conditions in the buildings and other specialized treatment (including fumigation) to forestall deterioration and decay.

Restoration without a deep understanding of materials' properties and styles is not a complete solution. If it does not affect the causes, it may be worse than nothing. Causes of the decay must be understood. Fundamental research has to be done on the properties of materials; new techniques must be experimented with; and, particularly, new substances used for conservation or repair must be carefully tested to make sure that they will not, now or in the foreseeable future, react adversely with the materials that they are intended to consolidate, or behave towards the objects in a fashion comparable to the pollutants in the air.

The conservation program of the Smithsonian is inadequate to these needs. It must be strengthened both in individual bureaus and in the central Conservation-Analytical Laboratory. Successful conservation efforts in the bureaus require knowledgeable personnel capable of recognizing and correcting specific local conservation problems and treating those items not requiring specialized treatment by the central laboratory.

Accessions of artifacts number about 130,000 a year. Proper treatment of these objects alone is well beyond the present capability of the Institution's facilities. Thirty-two man years of work each year is estimated to be required for new objects exclusive of the needs of hundreds of thousands of deteriorating objects already in the collections. Conservation and analytical work is detailed and painstaking. During FY 1974 despite disruption preparatory to rebuilding, 167 requisitions for 330 objects or samples were completed by CAL for 45 divisions of 17 bureaus. A paintings conservator was added to the staff of the laboratory in FY 1975 to conserve paintings and three dimensional objects of art of historical value in the National Collections.

In FY 1976, the Laboratory requests two additional conservators (\$32,000) to assist with conservation effort.

SMITHSONIAN INSTITUTION LIBRARIES

1974 Actual......\$1,165,000 1975 Estimate.....\$1,590,000 1976 Estimate.....\$1,868,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	86	4	90
11 Personnel Compensation	1,029	83	1,112
12 Personnel Benefits	95	7	102
21 Travel & Trans. of Persons	10	6	16
22 Transportation of Things	2		2
23 Rent, Comm. & Utilities	12	5	17
24 Printing and Reproduction	60	35	95
25 Other Services	44	82	126
26 Supplies and Materials	101	25	126
31 Equipment	237	35	272
TOTAL	1,590	278	1,868
Analysis of Increase			
Necessary Pay		40	
Program Funds		238	

ABSTRACT - The Smithsonian Institution Libraries provides basic library and information services required by the research, exhibits, and administrative programs of the Smithsonian Institution. In FY 1976 an increase of 4 positions and funding of \$238,000 is requested to meet the following needs: (1) to purchase necessary library materials (\$60,000); (2) to preserve and conserve materials, including the valuable Dibner Library collection recently received as a gift by the Institution (2 positions and \$71,000); (3) to develop computer cataloguing in order to improve the timeliness and efficiency of the Libraries' operations (1 position and \$33,000); (4) to complete cataloguing of the National Air and Space Museum library collection (1 position and \$68,000); and (5) to increase travel allowance to service bureau libraries (\$6,000). An amount of \$40,000 is requested for necessary pay.

PROGRAM - The Smithsonian Institution Libraries consists of a central library and 15 branch and bureau libraries providing support to the research, exhibit, educational, and administrative staffs of the Institution and to visitors by acquiring, cataloguing, binding and preserving books and other library materials, and by providing circulation and research services based on these collections. The Libraries' collections have achieved national significance in natural history, American ethnology, fine arts, and the history of science, American technology, and culture.

Recently, the largest single private library on the history of science and technology in the world was given to the Smithsonian by Bern Dibner. This extraordinary collection contains more than 25,000 rare books and other material including several hundred books printed before 1501. A conservative estimate of the present value of this collection is ten million dollars. The gift will enhance both the Libraries' and the National Museum of History and Technology's collections.

JUSTIFICATION OF \$238,000 INCREASE (Libraries):

Acquisitions - The library collections of the Smithsonian Institution are indispensable tools to the research, exhibits, and public service activities of the Institution. Severe inflation combined with additional library support to programs in the Institution has slowed improvements in the Libraries' ability to meet the needs of the Institution. Inflation, which was anticipated at 11 percent in FY 1974, was actually 30-35 percent for books and journals. When the effect of inflation is

considered, the current book dollar is worth only 59 cents, based on the July 1973 dollar. In effect, the purchasing power of the Libraries book budget of about \$200,000 has been cut by 40 percent as compared with 18 months ago. An increase of \$60,000 for FY 1976 is requested to enable the Libraries to restore some purchasing power for essential library materials.

Conservation and Preservation - It is estimated that almost 12,000 journal volumes in the natural history collections require rebinding. At least 20,000 leather-bound volumes require similar treatment. One position (\$17,000) and \$20,000 for contract binding and preservation are requested for FY 1976. This is an increase of 40 percent above funds available for these purposes in FY 1975. Even this increase, however, will not permit the Libraries to bind all newly acquired materials much less reduce backlogs of materials now on the shelves.

The Dibner Library is one of the world's outstanding collections in the history of science and technology. The collection requires the attention of a rare book specialist (\$17,000). An amount of \$17,000 for care of the collection is also requested.

Computerized Cataloguing - The Libraries is involved in an experiment with other Federal libraries to test the effectiveness of cooperative computer cataloguing. Preliminary evaluation of the system suggests that the Libraries will benefit in savings both in processing time and costs of cataloguing. Records of 60 percent of materials purchased by the Libraries are found in the joint computer data base. Catalogue cards are received by the Libraries within 10 days of on-line placement of the order. This compares with an average of three months which is required to prepare catalogue cards using manual cataloguing techniques. Cataloguing productivity has increased 30 percent in the first quarter of FY 1975 as compared with the same period of FY 1974 with no more application of staff. Full cataloguing, however, is only one means of gaining intellectual access to and control of library materials. Further improvements, such as automated serials control and computer-printed lists of materials received, must be developed in order to improve timeliness and reduce costs. An amount of \$25,000 is requested for computer costs, and one position (\$8,000) is requested to support these activities.

National Air and Space Museum Library Preparation - In 1976, as part of the Smithsonian Institution's Bicentennial program, the new National Air and Space Museum will open. Of the 20,000 titles in the NASM Bureau Library, approximately 12,000 titles are not catalogued and are therefore difficult to use. The Libraries gives high priority to cataloguing the entire NASM collection for the opening of the Museum.

Studies indicate that approximately 2,000 of the NASM uncatalogued titles can be found in the computer data base. The remaining titles, however, will require application of other cataloguing techniques. The Libraries' cataloguing staff cannot process the NASM volumes in a single year and continue to catalogue new materials acquired. In order to expedite the cataloguing of a major portion of the NASM material, \$60,000 is requested to catalogue approximately 10,000 volumes by contract, and one position (\$8,000) is requested to perform related processing activities in-house.

Travel - The Libraries has administrative responsibility for bureau libraries in the Canal Zone (Smithsonian Tropical Research Institute), in New York City (Cooper-Hewitt Museum), and in Cambridge, Massachusetts (Smithsonian Astrophysical Observatory). Proper servicing of these libraries requires travel by Washington staff and the staff of the bureau libraries. In addition, the gift of the Dibner Library will require frequent trips to Connecticut by Libraries staff to select materials for the collection. Furthermore, the Libraries has become involved in international library and documentation activities. A principal means of professional development for the 32 professionals on the staff takes place on the national level, and frequently involves travel to seminars and conferences. These factors, in combination with increased travel costs, create serious deficiencies in the Libraries' travel allowance (\$10,000 in FY 1975). An increase in the Libraries' travel allowance of \$6,000 is requested to enable the Libraries to administer effectively bureau libraries outside of the Washington, D. C. area and to enable participation in international activities and in essential professional and staff development activities.

OFFICE OF EXHIBITS CENTRAL

1974 Actual......\$ 960,000 1975 Estimate.....\$ 972,000 1976 Estimate.....\$1,007,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	50	0	50
11 Personnel Compensation 12 Personnel Benefits 21 Travel & Trans. of Persons 23 Rent, Comm. & Utilities 24 Printing and Reproduction 25 Other Services 26 Supplies and Materials 31 Equipment	822 70 6 4 5 15 30 20	32 3	854 73 6 4 5 15 30 20
TOTAL	972	35	1,007
Analysis of Increase Necessary Pay Program Funds		35 0	

ABSTRACT - The Office of Exhibits Central (OEC), working in close collaboration with museum scientists, curators, and historians, prepares exhibits and related products for those museums, programs, and other offices not having their own in-house capabilities. OEC also provides specialized exhibit assistance to other bureaus and offices. No program increase is requested for this office. Necessary pay in the amount of \$35,000 is sought for existing staff.

PROGRAM - The Office of Exhibits Central provides design, production, installation, and maintenance services to those museums, programs, and other offices of the Institution not having their own in-house capabilities for this work and provides the following exhibit assistance to other museums whose programs do not require or allow full-time staffing and/or establishment of shop facilities. Consultation as well as job performance is available in the following specialized areas: label editorial services, exhibition lighting, exhibit motion picture production, audio-visual installation and maintenance, freeze-dry taxidermy and the services of models, plastics, and restoration laboratories (specializing in fluid, thermo-setting, and reinforced plastics used in museum applications).

OEC also provides and coordinates training in exhibition media and techniques with the Office of Museum Programs and is developing programs to research, design, develop, evaluate, and communicate new exhibition techniques, systems, and procedures of value to the museum community.

During the first half of FY 1975, the OEC completed 89 exhibit and exhibit-related projects for 16 separate Smithsonian "clients" and provided consultant service to three museums outside the Institution. At the same time, 60 projects--long and short term--remained active on OEC schedules. Major OEC effort in the past 18 months has been devoted to providing assistance and/or full-program performance for the following exhibitions and activities: new exhibits for the Smithson Crypt, off-Mall bureaus, and the Commons cases in the Smithsonian Institution Building; the opening exhibitions at the Hirshhorn Museum; the Panda House exhibits and a Map-Directory with the National Zoological Park (NZP); a traveling exhibition "ZOO/100" with both the NZP and the Traveling Exhibition Service; and over 30 projects for Traveling Exhibition Service including several exhibitions produced in multiple editions. Models, plastics, and restorations were produced for the "Discovery Room" and "Ice Age Mammals" for the Museum of Natural History as well as "Suiting Everyone" for the Museum of History and Technology.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

1974 Actual.......\$72,000 1975 Estimate.....\$92,000 1976 Estimate.....\$96,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	6	0	6
11 Personnel Compensation	54	4	58
12 Personnel Benefits	4		4
21 Travel & Trans. of Persons	3		3
22 Transportation of Things	14		14
25 Other Services	17		17
TOTAL	92	4	96
Analysis of Increase			
Necessary Pay		4	
Program Funds		0	

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides carefully selected, well-designed, and widely circulated traveling exhibits covering a diversified range in the fields of art, design, science, technology, history, and education. These exhibits include not only Smithsonian exhibits, but also those organized and lent by numerous Government agencies and individuals and organizations throughout the world. No program increase is sought for FY 1976. Necessary pay for existing staff in the amount of \$4,000 is requested.

PROGRAM - SITES, which has been in continuous operation for 23 years, is the only nation-wide organization circulating exhibitions of an interdisciplinary curriculum serving specialized and general museums, galleries, and educational and cultural organizations throughout the nation and is the sole official agency of the U. S. to circulate official exhibitions from abroad. The non-Federal operating budget for FY 1975 is \$195,000, not including a projected \$330,000 of special purpose gifts, grants, and contracts and \$306,000 from Smithsonian Bicentennial program funds.

Approximately 5 million people view SITES exhibitions annually (upwards of 625 installations viewed by an average of 8,000 each). The Federal appropriations for this activity have enabled exhibition rental fees to be kept lower than would otherwise be possible. In FY 1973, exhibitions renting for over \$200 numbered 72, while those costing under \$200 numbered 29. In FY 1974, the first year the beneficial effect of the Federal appropriation was felt, the split was 52-52. In FY 1975, those renting for under \$200 will rise to 68 and those over \$200 will be 49. The lower rental fee enables smaller institutions to have access to exhibits.

Major progress is being made in developing the educational potential of SITES' shows. Now, more than ever before, exhibit workbooks and program suggestions are being developed to expand the benefit and worth of each show for exhibitors.

Two major programs have been undertaken by SITES to enhance Bicentennial opportunities for SITES' exhibitors. The first is directed toward making Smithsonian expertise and objects available nation-wide. The second is a means for the United States to host large exhibitions of foreign-origin during the Bicentennial. These two programs join SITES' basic program of 117 shows in circulation. Eventually, the

two new programs will double the total number of shows available. Special Bicentennial appropriations to the Smithsonian have made the first new program possible; a contract with the American Revolutionary Bicentennial Administration has enabled the second program to begin.

Number of Bookings Each State (July 1, 1974 - December 31, 1974)

Alabama	7	Montana	0
Alaska	2	Nebraska	3
Arizona	3	Nevada	0
Arkansas	7	New Hampshire	9
California	23	New Jersey	14
Colorado	10	New Mexico	4
Connecticut	4	New York	59
Delaware	7	North Carolina	4
District of Columbia	9	North Dakota	1
Florida	17	Ohio	16
Georgia	3	Oklahoma	4
Hawaii	1	Oregon	4
Idaho	2	Pennsylvania	18
Illinois	21	Rhode Island	1
Indiana	18	South Carolina	11
Iowa	8	South Dakota	0
Kansas	17	Tennessee	12
Kentucky	3	Texas	39
Louisiana	7	Utah	3
Maine	3	Vermont	1
Maryland	8	Virginia	10
Massachusetts	17	Washington	6
Michigan	9	West Virginia	10
Minnesota	19	Wisconsin	13
Mississippi	13	Wyoming	0
Missouri	20		

Partial Listing of Available or Scheduled Exhibits

Exhibits Based on Smithsonian Collections

Suiting Everyone

American Agriculture: A Continuing Revolution
The Men and Machines of American Journalism
The Photographer at the Frontier
Prints from Wood
And the Band Played On.....
In the Minds and Hearts of the People

Blacks in the Westward Movement

Other Exhibits

Hey, Look at Me (D.C. Children's Art)
Solar Energy
Australia Goes Metric
Man in His Environment
In Quest of Cockaboody
Great American Scream Machine
(Roller Coaster)
Lion Rugs From Fars

SMITHSONIAN ARCHIVES

1974 Actual \$157,000 1975 Estimate \$175,000 1976 Estimate \$191,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	10	0	10
11 Personnel Compensation	138	15	153
12 Personnel Benefits	12	1	13
21 Travel & Trans. of Persons	2		2
25 Other Services	8		8
26 Supplies and Materials	4		4
31 Equipment	11		11
TOTAL	175	16	191
Analysis of Increase			
Necessary Pay		6	
Program Funds		10	

ABSTRACT - The Smithsonian Archives is the official memory of the Institution and a valuable research resource for scholars working in the history of American science and in the history of the cultural institutions which are under Smithsonian care. The Archives currently has control over six million documents and is developing intellectual control over several million additional documents held in research and curatorial areas.

The FY 1976 budget request proposes a program increase of \$10,000 to fund an oral history program designed to document the history of the Smithsonian Institution. An amount of \$6,000 is sought for necessary pay for existing staff.

PROGRAM - The Smithsonian Institution holds a unique collection of museum objects and archives for research and exhibition. Natural history specimens, art objects, and other collections are interpreted by archival documentation which supplements and explains them. Archival records of the Smithsonian's activities also attract historians and other scholars interested in science and art in the nation's capital from the 1830's to the present. Some six million documents are now in the central archives, while approximately ten million more under the care of the Archives remain spread throughout the Institution.

The Smithsonian Archives strives to achieve intellectual control over the vast and dispersed archival resources of the Institution amounting to several million documents. In calendar year 1974 the Archives completed records surveys of the National Museum of Natural History, the National Museum of History and Technology, and the Smithsonian Astrophysical Observatory. Systematic records retention schedules are being implemented for those bureaus; and an institution-wide records management program was started. Computerized control of archives was extended; and microfilming of the Institution's main accession file continued. Accessions totalled over one million documents, including the central files of the United States National Museum, 1902-1935; and the papers of A. Remington Kellogg, H. Helm Clayton, and Austin H. Clark.

JUSTIFICATION OF \$10,000 INCREASE (Archives) - The Smithsonian Archives has developed an oral history program designed to document the history of the Smithsonian Institution and the history of the natural sciences in America. In order to continue and expand the program an oral historian and clerk-typist are needed half-time to conduct and transcribe the interviews.

NATIONAL MUSEUM ACT

1974 Actual......\$884,000 /1
1975 Estimate.....\$802,000
1976 Estimate.....\$767,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	3	0	3
11 Personnel Compensation	55	-11	44
12 Personnel Benefits	5	- 1	4
21 Travel & Trans. of Persons	14	- 1	13
23 Rent, Comm. & Utilities	5	- 4	1
24 Printing and Reproduction	6	- 3	3
25 Other Services	3	2	5
26 Supplies and Materials	2	- 1	1
31 Equipment	2	- 1	1
41 Grants	710		695
TOTAL	802	-35	767
Analysis of Increase			
Necessary Pay		2	
Program Funds		-37	

ABSTRACT - The National Museum Act is a technical assistance program granting funds for specific proposals which advance the museum profession at large through training, research, publication, or professional assistance. Through these programs, museum personnel have the opportunity to receive training which was not available previously. A slight decrease from 1975 is due primarily to programmatic adjustments and reduced requirements for various services, supplies, and equipment. A net saving of \$35,000 is projected.

PROGRAM - Public Law 93-345, approved July 12, 1974, reauthorized appropriations for the National Museum Act through FY 1977 and funding of \$1,000,000 to the Smithsonian Institution each year. Of this amount, \$800,000 was appropriated for FY 1975. Particular concern is expressed in the legislation for the needs of conservation in training, research, and coordination.

Funds appropriated to the Smithsonian Institution for the implementation of the National Museum Act are made available, through grants and contracts, to museums, professional associations, and universities. Such funding is determined by the National Museum Act Advisory Council appointed for this purpose by the Smithsonian Institution. The membership of the Advisory Council encompasses the principal museum disciplinesart, science, and history—and is broadly representative of all regions of the United States. The Council advises and assists the Secretary in determining priorities and assessing the quality of programs seeking support under the Act.

In the first half of FY 1975, 123 applications have been received. Only programs which demonstrate to the Advisory Council careful structure and sound administration receive support. The major aim of the National Museum Act is to provide opportunities for professional enhancement and research which can be demonstrated to be of usefulness

^{/1} Includes \$100,000 each transferred to the National Endowment for the Arts and the National Endowment for the Humanities as required by PL 91-629. PL 93-345 eliminates this fund transfer requirement.

to museums. Through November 1974 a total of 32 projects have been approved in the amount of \$325,000. The balance of this year's appropriation will be awarded at the March and June 1975 meetings of the Advisory Council. Grants awarded to date include: 12 travel fellowships to museum professionals to study techniques in museum management and programs; 5 awards for stipend support in college and university museum training programs; 13 grants to support short-term seminar/workshop training programs; and 2 special projects.

In the second half of FY 1975 new programs relating to conservation training and research were introduced. The staffs of the National Museum Act and of the Office of Museum Programs work closely with the National Conservation Advisory Council, funded by the Act, whose aim is to assess the nation's needs in conservation training, research, facilities, and the requirements that could be served by the creation of regional conservation centers. Particular emphasis is being given in these studies to define what form a "National Institute for Museum Conservation" might take, and whether such an organization could adequately serve the nation's needs.

JUSTIFICATION OF \$37,000 DECREASE - The decrease in travel, part-time services, and equipment result in an overall budget adjustment of \$37,000. The impact of the total reduction upon grants is expected to be nominal.

SMITHSONIAN INSTITUTION SPECIAL PROGRAMS

These special programs make use of total Institutional resources, including staff research competence, collections, and space for exhibits, to produce outstanding scholarship, exhibits and other presentations, and additional opportunities for public education. These special programs include:

- --The American Revolution Bicentennial Program which will advance the Institution's efforts to celebrate and portray "The American Experience," the first two-hundred years of American history and what they may mean for the future.
- --The Environmental Sciences Program which is designed to shed light on complex biological processes that need to be better understood before solutions to national ecological programs can be determined.
- --The Major Exhibition Program which funds the design and production of exhibits of unusual national significance and timeliness.
- --The Academic and Educational Programs offices which conduct interdisciplinary seminar series, coordinate educational programs for students at the elementary and secondary school level, and provide opportunities for outstanding pre- and post-doctoral investigators from across the nation to work under the supervision of the Institution's professional staff.
- --The Research Awards Program which enables the Institution to fund expecially meritorious studies through a competitive selection process.

Full descriptions of these programs appear in the following sections of this budget.

AMERICAN REVOLUTION BICENTENNIAL PROGRAM

1974 Actual......\$1,745,000 1975 Estimate......\$3,847,000 1976 Estimate......\$4,256,000

(Dollars in thousands)	Base	Increase	Est.
	FY 1975	Requested	FY 1976
Number of Permanent Positions	2	0	2
11 Personnel Compensation 12 Personnel Benefits 21 Travel & Trans. of Persons	671	381	1,052
	50	38	88
	105	94	199
22 Transportation of Things 23 Rent, Comm. & Utilities 24 Printing and Reproduction 25 Other Services	49	54	103
	7	9	16
	430	184	614
	2,063	-377	1,686
26 Supplies and Materials 31 Equipment	243	97	340
	215	-65	150
	14	-6	8
TOTAL	3,847	409	4,256
Analysis of Increase Necessary Pay Program Funds		9 400	44

ABSTRACT - In less than three months, the official observance of America's 200th anniversary begins. At the Smithsonian, the date will be marked by the opening, on April 19, 1975, of the National Portrait Gallery's Bicentennial exhibition, "The Dye Is Now Cast: The Road to American Independence 1774-1776." The Institution, as a result of the continuing encouragement and support of the Congress since 1965, is well prepared for the Bicentennial period. Its program, under the general theme of The American Experience, includes twenty-three separate projects involving fifteen bureaus or divisions. Within the next eighteen months in Washington, thirteen major exhibitions and the new National Air and Space Museum will have opened. Some two hundred traveling exhibitions will be circulating throughout the country, and major scholarly publications in the fields of anthropology, art, and history will be published. Finally, during the summer of 1976, millions of visitors to Washington will see the Festival of American Folklife. The individual projects are now all in the final phases of production, and there is no increase in program funds required to complete these projects as scheduled. However, an increase of \$400,000 in temporary program costs is requested to cover the non-recurring expenses of essential, temporary personnel and supplies to meet the demands of increased visitor loads during the peak spring and summer months of 1976. Necessary pay in the amount of \$9,000 is also sought.

PROGRAM - The American Experience - FY 1976 Request:

A New Museum

The National Air and Space Museum*

Exhibitions in Washington

A Nation of Nations (National Museum of History and Technology)	\$540,000
Ecology 200 - Our Changing Land (National Museum of Natural History)	
1876 - A Centennial Exhibition (Arts and Industries Building)	360,000
Revolutionary Period Exhibitions (National Portrait Gallery)	150,000

Exhibitions in Washington (Cont.)

America as Art (National Collection of Fine Arts) Americas and Symbols in the City (Renwick Gallery) The World's Artists and America* (Hirshhorn Museum & Sculpture Garden) Arts of Asia* (Freer Gallery of Art) The Federal City (Smithsonian Institution Building) Traveling Exhibitions	\$ 65,000 99,000 50,000 \$1,264,000
Information and Exhibit Systems Object-oriented Exhibitions (Smithsonian Institution Traveling Exhibition Service) Exhibits Design and Production Laboratory (Anacostia Neighborhood Museum)	\$380,000 200,000 <u>50,000</u> \$630,000
Festival Festival of American Folklife Major Scholarly Projects	\$1,000,000
Inventory of American Paintings Before 1914 (National Collection of Fine Arts) Catalogue of American Portraits* (National Portrait Gallery) Bibliography of American Art (Archives of American Art) Encyclopedia of North American Indians (Center for the Study of Man) Sternwheeler Bertrand (National Museum of History and Technology) The United States in the World (International Conference - Smithsonian Institution, American Studies Association, American Council of Learned Societies) Kin and Communities: The Peopling of America* (Smithsonian Institution, American University)	\$119,000 45,000 300,000 75,000 60,000
Support Visitor Orientation and Services for the Bicentennial Year General Administration Protection Buildings and Facilities Management TOTAL	301,000 84,000** 314,000 64,000 \$ 763,000 \$4,256,000

^{*}Not funded by Bicentennial appropriation.

JUSTIFICATION OF PROGRAM - A full description of the Smithsonian's Bicentennial program, project by project, is included in the supplement to this budget. FY 1976 will be the Smithsonian's final year of intensive effort toward realization of the Institution's Bicentennial program. As the projects, most of which are above and beyond the normal level of operations, are completed, the need for these special funds will decrease accordingly in FY 1977.

In this critical period leading to the timely openings of all Bicentennial exhibitions in Washington, D.C., and the preparation of most of the traveling exhibitions

^{**} Includes necessary pay for temporary staff assigned to all projects.

as well as an expanded Festival of American Folklife, the largest need is for temporary manpower. Staffing considerably beyond normal level is essential to achieve increased production while maintaining the Smithsonian's regular program. An amount of \$1,140,000 is requested for such personnel, and \$1,686,000 for contractual services to accomplish needed work outside the Institution's capability. Funds will be used for temporary help in exhibits installation, Folklife Festival site construction, preparation of catalogues and other materials for publication, and general management and coordination. In addition, temporary guards and maintenance personnel will be hired during the peak spring and summer months in 1976 to meet the demand of larger crowds and extended hours of Smithsonian buildings not previously opened in the evenings.

An amount of \$614,000 is requested for printing and reproduction. Half of this funding will support the continued composition process and printing of the twenty-volume Encyclopedia of North American Indians. The remaining funds will support the printing of seven major catalogues and additional educational materials and publications related to the Bicentennial exhibitions, as well as visitor orientation and information brochures.

For all projects, additional supplies and materials are needed. Borrowed objects for exhibitions must be transported to Washington, D.C. and insured. Special equipment must be acquired for use in exhibitions, for the Festival presentation, and for crowd control. Funding of \$617,000 is requested for these purposes.

Finally, \$199,000 is requested for transportation of persons. More than one-half of this request is for the final research phases and for participant-travel required for the Festival of American Folklife. Another one-fourth will support travel costs for participants in the International Bicentennial Conference, "The United States in the World". These are one-time non-recurring costs. The remaining funds will support research, travel required to maintain the security of borrowed objects, and the management of traveling exhibitions.

ENVIRONMENTAL SCIENCES PROGRAM

1974 Actual.....\$190,000 1975 Estimate....\$189,000 1976 Estimate....\$193,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	2	0	2
11 Personnel Compensation	112	4	116
12 Personnel Benefits	10		10
21 Travel & Trans. of Persons	14		14
25 Other Services	36		36
26 Supplies and Materials	7		7
31 Equipment	10		10
TOTAL	189	4	193
Analysis of Increase			
Necessary Pay		4	
Program Funds		0	

ABSTRACT - The Environmental Sciences Program (ESP) was established in FY 1971 to provide coordinated environmental research at the Smithsonian. A plan has been developed to assemble and analyze biological and physical data on specific important ecosystems to predict the consequence of environmental change. Two Smithsonian research facilities, the Smithsonian Tropical Research Institute (STRI) in Panama and the Chesapeake Bay Center for Environmental Studies (CBCES), are the principle sites being used to carry out these studies. No program increase is requested in FY 1976. Funding in the amount of \$4,000 is sought for necessary pay.

PROGRAM - The Environmental Sciences Program administers a long-range, multi-bureau study of natural fluctuations in several different ecosystems. The Smithsonian is particularly suited to undertake this type of research as a result of the range of disciplines represented in the various bureaus, its large collections of plants and animals with detailed distribution and abundance data, and its control over permanent and protected field-research sites in both temperate and tropical zones. Staff resources consist of specialists from several Smithsonian science bureaus-STRI, CBCES, the Radiation Biology Laboratory, the National Museum of Natural History, and the National Zoological Park, as well as from several universities.

A study is now being conducted in three contrasting environments: a tropical forest on Barro Colorado Island, an intertidal coral reef at Galeta Point (both STRI reserves in Panama) and a temperate estuary and its watershed in the Rhode River (CBCES). At each site, a number of physical, chemical, and biological factors which vary with time and which together indicate stability, predictability, and variability of each environment are routinely measured. During FY 1974 special attention was given to evaluating results and casting preliminary models of the data. The first data bank report displaying monitoring results for calendar year 1973 has been published. The 1974 results are now in preparation. A heavy emphasis was placed in 1974 and will continue to be placed in 1975 upon systems analysis of the data and construction of biological models. The ESP is not independent of other research at the various sites. It supplies environmental data to other projects and uses data collected by them. This cooperation is essential because the range of subjects being studied demands an interdisciplinary approach.

MAJOR EXHIBITION PROGRAM

1974	Actual	\$103,000
1975	Estimate	\$ 80,000
1976	Estimate	\$260,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975	Requested	FY 1976
Number of Permanent Positions	0	0	0
21 Travel & Trans. of Persons		3	3
22 Transportation of Things		3	3
25 Other Services	73	181	254
41 Grants	7		
TOTAL	80	180	260
Analysis of Increase			
Necessary Pay		0	
Program Funds		180	

ABSTRACT - The major permanent exhibitions of the Smithsonian Institution are nationally and internationally recognized as among the best examples of public communication and education in the museum world. The Major Exhibition Program has as its purpose the production of such exhibitions that will supplement the regular exhibits programs of the museums. The "Benefits from Flight" exhibit was initially designed in FY 1974 with design continuing in FY 1975. An increase of \$180,000 is sought in FY 1976 to complete this exhibit which will be displayed in the new National Air and Space Museum building.

PROGRAM - The "Benefits from Flight" exhibit will present the many benefits that have accrued to man and society since the advent of powered flight. The scope of this exhibition has been broadened, from the earthbound benefits of space flight alone, to encompass the consequences of air and space flight which have emerged over the course of this century. The development of this exhibit has required a substantial research effort intended to assess critically the scientific, technological, economic, historical, and social dimensions of selected benefits. That research, now in the process of completion, has combined the resources and talents of the Smithsonian curatorial staff, two graduate students supported by Smithsonian cooperative fellowships, and three contracted non-profit research firms. With the impending completion of documentation, the level of research effort has gradually decreased. Concomitant exhibit design has begun in coordination between the curatorial and design staffs of the Smithsonian and an outside design firm. Production will begin in early fiscal 1976.

The thematic structure of the hall, mirrored in its preliminary design, establishes the relationships among air and space research, development and operations, and the persons to whom the results of these activities accrue.

The most significant benefits which have emerged in the historical development of air and space are those directly associated with flight: high-speed personnel transportation, staple supply and disaster relief, airborne defense and reconnaissance, satellite monitoring of earth conditions and resources, relay of information, and basic scientific knowledge. Our view also includes the broader social impact: flight in the arts and in popular culture, flight as a homogenizing and educating influence, and flight as a source of entertainment, for example.

The high technology associated with, and nurtured within, the aerospace industry has been and continues to be adapted to serve many other needs of our society. The exhibit will also explain how these needs are met through the transfer of aerospace technology to ground-based applications in medical, transportation, public service. managerial, and manifold other segments of society.

JUSTIFICATION OF \$180,000 INCREASE (Exhibits) - FY 1976 will be the year for fabrication and installation of this exhibit. This will be the final installment on this exhibit. With the \$183,000 already obligated, this major exhibit will cost a total of \$443,000.

ACADEMIC AND EDUCATIONAL PROGRAMS

1974 Actual......\$642,000 1975 Estimate.....\$620,000 1976 Estimate.....\$626,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	11	0	11
11 Personnel Compensation	164	6	170
12 Personnel Benefits	13		13
21 Travel & Trans. of Persons	6		6
23 Rent, Comm. & Utilities	3		3
24 Printing and Reproduction	27		27
25 Other Services	401		401
26 Supplies and Materials	4		4
31 Equipment	2		2
TOTAL	620	6	626
Analysis of Increase			
Necessary Pay		6	
Program Funds		0	

ABSTRACT - A major Smithsonian objective is to make its resources for learning available to the formal education community and to the general public. These efforts take the form of programs in higher education, advanced studies, and offerings at the elementary and secondary education level. No program increase is sought for FY 1976. Funds in the amount of \$6,000 are sought for necessary pay for the existing staff.

PROGRAM - Since 1965 as a major part of its higher education programs the Smithsonian has offered fellowship support to 228 Ph.D. candidates and to 221 post-doctoral investigators to enhance their ability as scholars and teachers through collaboration and study with the Institution's research staff. Over 498 undergraduate and first and second-year graduate students have been offered the opportunity to consult the Institution's research staff and collections for short periods. Administered by the Office of Academic Studies, these opportunities are extended both to strengthen the research capabilities of the Smithsonian and to make available to the scholarly and scientific community the Institution's specialized resources. Its effectiveness derives from close cooperation with the nation's universities and colleges, which welcome opportunities for their students to receive specialized Smithsonian training that their own facilities cannot provide.

The Office of Smithsonian Symposia and Seminars is responsible for the Smithsonian's International Symposia Series, its biennial program of public activities centering on a single theme of contemporary importance, from which are published the collected original papers presented and other relevant materials. In 1974 The Cultural Drama: Modern Identities and Social Ferment was published. This was based in part on the fourth International Symposium held in 1970. Scheduled for publication in spring 1975 is The Nature of Scientific Discovery, based on the fifth symposium held in April 1973. The office now is planning the sixth and seventh in the symposia series, both under the Bicentennial program. "Kin and Communities: The Peopling of America" will be held in June 1976 to coincide with the opening of the Festival of American Folklife and in liaison with "A Nation of Nations," a Smithsonian Bicentennial exhibit. This symposium will reflect on the role of family institutions and communities in shaping the nation during its first two hundred years and as continuing links to African, Asian, European, and other cultures which have enriched American civilization. "The United States in the World," planned as the seventh symposium, will be held in September 1976. It will

provide an examination by scholars and writers (including about 200 from other countries) of the far-reaching influences of the American synthesis of Old World cultural patterns, including those of the American Indians, and the interaction between the mosaic culture of the U. S. and other societies.

The Office of Elementary and Secondary Education coordinates the education programs which are now located directly in the museums. The office prepares publications, audio-visual aids, and other educational materials, directed at pre-college students and their teachers. It also serves as the liaison between the Smithsonian and the D.C. Metropolitan area schools, conducting workshops for over two thousand area teachers in FY 1975. The office is active with area schools in developing special outreach projects. FY 1975 brought the development of outreach kits with both Fairfax County, Virginia and Montgomery County, Maryland teachers. Through regularly scheduled training activities, assistance is provided to the Smithsonian docent program with particular emphasis on teaching methodologies.

SMITHSONIAN RESEARCH AWARDS PROGRAM

1974 Actual......\$450,000 1975 Estimate.....\$450,000 1976 Estimate.....\$450,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	0	0	0
41 Grants	450	0	450
TOTAL	450	0	450
Analysis of Increase			
Necessary Pay		0	
Program Funds		0	

ABSTRACT - The Research Awards Program finances special research projects which cannot be supported from the regular budgets of the bureaus. Since 1966, 280 proposals have been funded through this program, and more than 200 publications which are directly related to the research have been produced. No program fund increase is being requested for FY 1976.

PROGRAM - Prior to FY 1966, the Smithsonian received funds from the National Science Foundation (NSF) for special research projects of individual staff members. In 1964, the Congress prohibited the NSF from making grants for scientific research to other Government agencies. The NSF instituted a further limitation that it would no longer make grants to any agency or institution receiving direct Federal appropriations. The Research Awards Program was begun in FY 1966 by an appropriation of \$350,000 to the Smithsonian Institution for the purpose of financing new or continuing research projects formerly eligible for support from NSF.

Proposals are submitted each year by members of the Smithsonian Institution staff to support new and innovative research. All proposals have undergone a careful scientific or scholarly review in their respective bureaus before they are reviewed by an advisory committee of scientists from outside the Institution. Projects are selected on the basis of their showing an imaginative and exciting approach to research and scholarship efforts that could not normally be carried out with regularly budgeted departmental funds.

The work supported by the Research Awards Program is often the best of the Institution's productivity and the reason for acquiring professional staff of the highest competence and imagination. Further, the program provides an opportunity for researchers to engage in collaborative field research with colleagues located in other institutions. Many opportunities for participation in expeditions and other field projects would be lost were it not for the Research Awards Program providing funding assistance. Some recent accomplishments of this research are: better understanding of the nature of volcanic eruptions; help in unraveling the very early history of the earth through work on the chemistry and mineralogy of ancient rocks discovered in West Greenland; and possible improvement of the local food supply in developing countries as a result of the identification of a specialized bee necessary for effective pollination.

In FY 1975, members of the Smithsonian staff again submitted proposals for funding up to three years in order to provide for better stability, continuity, and planning of research. Of the sixty-one proposals received for FY 1975 amounting to \$1,316,402, forty were funded in the amount of \$450,000. It is intended that the program will operate at this level in FY 1976.

OFFICE OF THE SECRETARY

1974 Actual......\$654,000 1975 Estimate.....\$753,000 1976 Estimate.....\$779,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	29	0	29
11 Personnel Compensation	572	24	596
12 Personnel Benefits	49	2	51
21 Travel & Trans. of Persons	8		8
23 Rent, Comm. & Utilities	17		17
24 Printing and Reproduction	2		2
25 Other Services	71		71
26 Supplies and Materials	18		18
31 Equipment	16		16
TOTAL	753	26	779
Analysis of Increase Necessary Pay Program Funds		26 0	

ABSTRACT - The Office of the Secretary is responsible for planning, implementing, and reviewing the progress of all Smithsonian operations. No program increase is sought. An additional amount of \$26,000 is being sought for necessary pay for current staff.

PROGRAM - I. Immediate Office of the Secretary including Secretary's Files and Office of the Under Secretary: With 18 positions and \$490,000 the Office of the Secretary plans, implements, and reviews the progress of all Smithsonian operations.

II. Other: The remainder of the funding identified for this office, 11 positions and \$289,000 support the Director of Support Activities, the Travel Services Office, and the Curator of the Smithsonian Institution Building.

The Director of Support Activities directs and reviews the Support Activities Group. This group includes the Office of Personnel Administration, Office of Equal Opportunity, Office of Supply Services, Information Systems Division, Management Analysis Office, Office of Protection Services, Office of Facilities Planning and Engineering Services, Office of Plant Services, Office of Printing and Photographic Services, and Travel Services Office.

The Travel Services Office assists official Smithsonian travelers in developing domestic and foreign travel plans, estimating costs, and planning the most economical routing in keeping with Government and Smithsonian Institution regulations.

The Curator of the Smithsonian Institution Building is responsible for the exhibits in this old building and the furnishing of the public and office spaces in the style furniture that was in vogue at the time of its construction.

OFFICE OF THE GENERAL COUNSEL

1974 Actual......\$277,000 1975 Estimate.....\$306,000 1976 Estimate.....\$331,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	11	0	11
11 Personnel Compensation	263	10	273
12 Personnel Benefits	23	1	24
21 Travel & Trans. of Persons	8		8
23 Rent, Comm. & Utilities	3		3
25 Other Services	3	12	15
26 Supplies and Materials	3	1	4
31 Equipment	3	1	4
TOTAL	306	25	331
Analysis of Increase			
Necessary Pay		11	
Program Funds		14	

ABSTRACT - The Office of the General Counsel (OGC) is responsible for all Smithsonian legal matters. These legal matters combine those arising from the operations of a university-like, charitable corporation with those common to Government organizations. An increase of \$10,000 is requested to meet the need for outside legal counsel for advice on legal problems of Smithsonian units located in geographical areas beyond Washington, D.C., and \$4,000 is requested for the continued legal education of staff attorneys through attendance at legal seminars and for necessary legal reference services and texts. An additional \$11,000 is sought for necessary pay for existing staff.

PROGRAM - The OGC serves as counsel to the Board of Regents, the Secretary, and the staffs of bureaus, programs, and support offices of the Institution on the legal adequacy of proposed administrative actions and decisions and on the resolution of legal problems arising from operations. As such, the scope and volume of the OGC's workload parallel the direction of and developments in the diverse programs of the Institution. The legal problems combine those arising from the operations of a university-like, charitable corporation with those common to Government organizations, and include: the limitations and obligations of Smithsonian operations in relation to the functions, authorities, and regulations of Government entities; legislative review, drafting, and liaison; the uses and restrictions of trust funds; litigation; application of judicial decisions and executive branch directives and regulations; contract negotiation; tort claims and settlements; Federal and State excise, sales, amd gift taxes, deductions, and exemptions; patents and trademarks; copyrights; review of transfers by gift, loan, purchase, or bequest; and many areas of international law.

JUSTIFICATION OF \$14,000 INCREASE (General Administration) - With the increase of activity at a number of units located outside the Washington Metropolitan area (such as the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts, the Smithsonian Tropical Research Institute in the Canal Zone, and the Mount Hopkins Observatory in Tucson, Arizona), it has become necessary to secure the assistance of counsel in these localities to advise on problems involving applicable local laws. In addition, there is a need for specialized advice on such matters as international trademarks and the use of the Smithsonian name. Based on current experience it is estimated that \$10,000 will be necessary for this purpose in FY 1976. A further increase of \$4,000 for support costs is requested to allow staff attorneys to keep abreast of the law through attendance at law seminars and to allow the addition of pertinent reference material to the OGC law library.

OFFICE OF THE TREASURER

1974	Actual				\$915,000
1975	Estimate				\$722,000
					\$871.000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	34	2	36
11 Personnel Compensation	536	45	581
12 Personnel Benefits	45	89	134
21 Travel & Trans. of Persons	3		3
23 Rent, Comm. & Utilities	94	15	109
24 Printing and Reproduction	10		10
25 Other Services	17		17
26 Supplies and Materials	15		15
31 Equipment	2		2
TOTAL	722	149	871
Analysis of Increase			
Necessary Pay		103	
Program Funds		46	

ABSTRACT - The Office of the Treasurer provides financial management assistance and technical services to the Smithsonian. The postage indicia costs previously reflected in this office's budget are now shown (as of July 1, 1974) under the Office of Plant Services.

An increase of 2 positions and \$46,000 is requested to meet the following support needs: 1 position (\$20,000) to aid in the conversion from a manual to a computerized accounting system; 1 position (\$11,000) to assist in financial and reporting efforts directed towards the Bicentennial and other special programs; and an amount of \$15,000 for the rental of automated data entry, photocopier, and telecopier equipment and for the cost of computer usage. In addition, \$103,000 is requested for necessary pay, \$85,000 of which is for Workmen's Compensation payments.

PROGRAM - The Office of the Treasurer is composed of the Treasurer's immediate office, the office of programming and budget, the accounting division, and the grants and insurance administration division.

The immediate Office of the Treasurer provides overall direction for financial planning, budgeting, investment policy, accounting, reporting, and insurance, grant, and contract administration.

The accounting division is responsible for developing, implementing, and maintaining financial accounting and payroll systems; performing financial analyses and reporting; and operations including payroll, accounts payables and receivables, and related data processing.

The office of programming and budget is responsible for the planning, formulation, and agency-level presentation of estimates to the Office of Management and Budget and the Congress, and the execution and review of the Institution's Federal budget. It also prepares non-appropriated fund budgets for presentation to the Treasurer, Under Secretary, Secretary and Board of Regents and monitors their execution during the year.

The grants and insurance administration division which is financed with non-appropriated funds is responsible for the administration of contracts and grants from other institutions and agencies and for the administration of risk management programs.

JUSTIFICATION OF \$46,000 INCREASE (General Administration) - Accounting transactions continue to increase as the level of office and bureau activities increase and diversify. To cope with a rising workload, the accounting division has taken many actions to improve efficiency and effectiveness. For example, in FY 1975, the division put into operation a direct key-to-disk automated data entry system for use in vouchering and paying accounts. Its installation culminated several months of systems analysis and design, including integration with the Smithsonian's central computer, equipment selection, and orientation and training of employees. The division has also been successful in persuading frequent vendors to consolidate many separate billings per month into a single bill. These two innovations have resulted in the elimination of repetition in handling payment documents, reduction of volume and errors, and faster payment of invoices. Furthermore, the division has established a system of employees' time and attendance reporting which eliminates the bi-monthly keypunching of over 3,000 time cards. The new system utilizes an optical mark scanner to record special light sensitive pencil insertions. Incidence of error has been markedly reduced.

Nevertheless, to realize the full capabilities of the newly installed equipment, all segments of accounting operations must be reviewed and additional applications devised to achieve further automation. A systems accountant (\$20,000) is requested to provide combined technical and procedural support in order to: identify the accounting routines in need of automation; develop systems to effect automatic scheduling, projection, and accrual functions; integrate these systems with the Institution's central computer; and write an operations handbook on resulting updated procedures.

Smithsonian special programs, including the upcoming Bicentennial effort, require almost continual support from the accounting division to handle increased transactions, vendor inquiries, and requests for customized reports by offices and bureaus. For example, the several thousand expected participants in the summer-long Bicentennial Folklife Festival will generate many payment and accounting transactions. A technician (\$11,000) is sought to oversee the day to day financial activities of these special programs and to assist the requested systems accountant in installing accounting systems innovations.

An amount of \$5,000 is requested for automated data processing, photocopier, and telecopier equipment rental. An additional amount of \$10,000 is sought to meet the rising cost of computer paper and usage.

OFFICE OF PERSONNEL ADMINISTRATION

1974 Actual...... \$535,000 1975 Estimate...... \$638,000 1976 Estimate...... \$658,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	33	0	33
11 Personnel Compensation 12 Personnel Benefits 21 Travel & Trans. of Persons 23 Rent, Comm. & Utilities 25 Other Services 26 Supplies and Materials 31 Equipment	546 47 3 6 31 4	18 2	564 49 3 6 31 4
TOTAL	638	20	658
Analysis of Increase Necessary Pay Program Funds		20 0	

ABSTRACT - The Office of Personnel Administration develops and implements policy on matters related to manpower planning and managerial development. No increase in program funds is requested for FY 1976. Funding in the amount of \$20,000 is sought for necessary pay for existing staff.

PROGRAM - Among the services provided by the Office of Personnel Administration are manpower analysis, recruitment and placement, compensation programs, consultant services, training and career development, employee relations, labor-management relations, and special responsibilities in assuring equal opportunity. In addition, the Office bears responsibility for the implementation of new laws or policy, such as the Fair Labor Standards Act, Public Law 93-259.

In FY 1975, each of the major program areas has experienced an increase in activity deriving from the general growth of the Institution. Over 1,000 personnel actions (promotions, separations, within-grade increases, appointments, etc.) are processed each year. Major efforts have been directed towards the negotiation of a labor relations contract, staffing and placement for the new Hirshhorn Museum and improvement of recruitment procedures for guard positions. In addition, emphasis is being placed on updating personnel policies and procedures and expanding career opportunities for employees through increased specialized training. In FY 1975, approximately 30 inhouse training classes will be offered in typing, shorthand, the role of supervisors in equal employment opportunity, sexual assault prevention, secretarial and telephone techniques, dealing effectively with people, and executive development. More than 900 employees are anticipated to participate in these courses. In addition, approximately 950 employees are expected to attend courses in all areas of employee development offered by other organizations and institutions.

OFFICE OF AUDITS

1974	Actual				\$ 170,000
	Estimate.				
1976	Estimate				\$ 197,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	7	1	8
11 Personnel Compensation	156	18	174
12 Personnel Benefits	14	2	16
21 Travel & Trans. of Persons	5		5
25 Other Services	1		1
26 Supplies and Materials	1		1
TOTAL	177	20	197
Analysis of Increase			
Necessary Pay		6	
Program Funds		1.4	

ABSTRACT - The Institution's size, diversity, and variety of funding sources create a large volume of essential auditing assignments. Since its establishment, the Office of Audits has made important contributions to effective management. An increase of one position and \$14,000 will improve the office's capability to reach its goal of a reaudit every five years. An amount of \$6,000 is needed for necessary pay.

PROGRAM - The Office of Audits, established in FY 1970, is responsible for performing all internal auditing functions of the Smithsonian Institution. In order to ensure the utilization of effective management practices, it is the policy of this office to audit all principal programs, including administrative, financial and supporting programs, during each five-year period. Recent audits have included the National Museum Act, the Exhibits activities in the bureaus as well as Exhibits Central, the Travel Services Office, Chesapeake Bay Center, and the Smithsonian Tropical Research Institute. The results of these audits have been some monetary savings (applying the automatic pay feature to teleticketing and savings on car rentals), to better management, and improved procedures.

JUSTIFICATION OF \$14,000 INCREASE (General Administration) - With more than fifty Federal operating units, programs, and staff offices, several major appropriation accounts (totalling over \$92 million in FY 1975), and several private activities and a wide variety of other funds, there is a large volume of auditing to be done. With the current staff of 7 auditors, it will take another two years to complete the first audit cycle of all principal Smithsonian programs. Therefore, instead of reauditing every five years, the office will be on a seven-year cycle. It is estimated that it would take a total of ten auditors to enable the five-year reaudit program to become a reality. An additional auditor (\$14,000) is requested to help meet this total staff requirement.

OFFICE OF EQUAL OPPORTUNITY

1974 Actual......\$114,000 1975 Estimate.....\$109,000 1976 Estimate.....\$170,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	5	2	7
11 Personnel Compensation	97	36	133
12 Personnel Benefits	9	3	12
21 Travel and Trans. of Persons.	1	1	2
23 Rent, Comm. & Utilities		1	1
24 Printing and Reproduction		2	2
25 Other Services	1	17	18
26 Supplies and Materials	1		1
31 Equipment		1	1
TOTAL	109	61	170
Analysis of Increase			
Necessary Fay		4	
Program Funds		57	

ABSTRACT - The Office of Equal Opportunity (OEO) works to assure equality of opportunity in employment and in all policies and practices of the Institution. Several current programs involve the development and better utilization of the skills of minority employees, an improved communication system for handling grievances, improvement of women's career advancement opportunity and an upward mobility program. A program increase of 2 positions and \$57,000 is requested to further implement these programs. An amount of \$4,000 is being requested for necessary pay.

PROGRAM - The Equal Opportunity Program, established by Executive Order 11246 and further implemented by the "Equal Employment Opportunity Act of 1972," enacted as Public Law 92-261, requires the Smithsonian to conduct a positive action program which will provide true equality in all Smithsonian employment practices. It is the responsibility of the Office of Equal Opportunity to conduct such a program. Three major efforts currently underway include counseling, upward mobility, and the equal employment status of women.

The counselor program provides a channel through which employees may raise questions, discuss grievances, and receive resolutions of problems on an informal basis. Twenty-five permanent employees with other assigned duties have been trained as parttime equal employment counselors who assisted 162 persons in FY 1974.

The upward mobility program strives to ensure each employee the opportunity to seek and achieve his highest potential and productivity in employment situations with special emphasis being focused on employees at the lower levels of employment. Innovative ideas concerned with minority group training at the lower grade levels to correct inadequate education are currently being applied in several museum and support organizations. Additionally, within the upward mobility program is the overseeing of civil rights compliance with direct assistance programs and contracts and grants to ensure that the recipients practice equal opportunity. Six upward mobility programs are now operating in the National Museum of Natural History, Office of Plant Services, Protection Services, the Freer Gallery, National Air and Space Museum, and the National Museum of History and Technology.

The women's coordinator program functions as the principal advisory service to management on all matters pertaining to the equal employment status of women. A Women's Week was held in FY 1974 and FY 1975. Additionally, a women's orientation training activity was presented at the Smithsonian Astrophysical Observatory as an augmented feature to the guidance and operational facilities available to the Smithsonian Women's Council.

The 16 point program coordinator (again a regular employee who has accepted extra duties) serves as the focal point within the Smithsonian for advising agency management and the Director of OEO on the special employment concerns of Spanish-speaking citizens, assists in assessing the Spanish-surnamed employment situation, and participates in eliminating systemic barriers for Spanish-speaking citizens.

The OEO provides heads of bureaus, offices, and major organizations statistical reports on the racial and sex composition of respective work forces. Areas are noted that are out of balance and assistance is given to correct such situations, including the development of goals in areas where imbalance is reflected.

JUSTIFICATION OF \$57,000 INCREASE (General Administration):

An Institution-wide upward mobility program is needed to provide greater opportunities to the Institution's employees in dead-end or otherwise unsatisfying jobs. Presently upward mobility programs are operating in six bureaus, but these programs are offering this training to only nine employees. An upward mobility coordinator and an assistant (\$35,000) are needed to develop the Institution-wide plan, have it approved by the Civil Service Commission, and implement the plan. During the operational phase of this program, each of the employees will oversee the training of 35 to 40 employees. The program as it is now envisioned will include both on the job training and class work. Each program will be three years and during this time the OEO staff will counsel the employee, follow up with the on the job supervisors and evaluate both the training and the trainee. Funds are requested to finance training at non-Smithsonian facilities and to finance on-site education opportunities for this program (\$10,000).

Funds in the amount of \$12,000 are requested for other programs of this office. These funds will be used to enlarge the women's program, train additional counselors as well as replacement counselors, and for computer reports needed by both Smithsonian officials and the Civil Service Commission.

OFFICE OF PRINTING AND PHOTOGRAPHIC SERVICES

1974 Actual......\$779,000 1975 Estimate.....\$816,000 1976 Estimate.....\$858,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	39	1	40
11 Personnel Compensation	545	39	584
12 Personnel Benefits	44	3	47
21 Travel & Trans. of Persons	2		2
23 Rent, Comm. & Utilities	8		8
24 Printing and Reproduction	26		26
25 Other Services	60		60
26 Supplies and Materials	107		107
31 Equipment	24		24
TOTAL	816	42	858
Analysis of Increase			
Necessary Pay		23	
Support Funds		19	

ABSTRACT - The Office of Printing and Photographic Services is the Institution's central office for technical advice, guidance, and production in all matters concerning photographic, duplicating, and in-house printing services. The office coordinates photographic and printing activities and supplies technical support to the curatorial, scientific, technical, and administrative staffs. It also provides photographs, slides, and transparencies with lectures to the general public, schools, research foundations, educational publications, other museums, and government agencies. A support increase of 1 position, an assistant to the director (\$19,000), is requested in FY 1976. An additional \$23,000 is sought for necessary pay.

PROGRAM - The Office of Printing and Photographic Services (OPPS) provides photographic, printing, and other reproduction services. Its services are in support of research, collections management, and public education. Photographic services include studio and on-site photography, photographic copy restoration, processing and printing, filing and retrieval of negatives, preparing responses to public inquiries, and filling orders.

Printing and reproduction services include the production of certain exhibits catalogues, education pamphlets, and informative leaflets. In addition, OPPS prints and reproduces a variety of manuals, reports, specimen labels, and administrative directives. These services are accomplished by utilizing in-house multilith, photostatic copier, and letterpress equipment.

JUST1F1CAT1ON OF \$19,000 1NCREASE - The consolidation of the Office of Photographic Services and the Duplicating Section in FY 1974 has resulted in increased emphasis on scheduling, production, quality control, and personnel and space management. Serious backlogs currently exist, however, in the photographic library and processing units resulting in delays in filling staff and public orders. These backlogs and delays result from the absence of written production schedules and procedures and from a deficient system of filing and retrieval of valuable negatives and transparencies.

An assistant to the director (\$19,000) is requested to establish and maintain a positive system of production control and to draft and implement policies and procedures on proper care, storage, and retrieval of negatives, transparencies, and other photographic material.

INFORMATION SYSTEMS DIVISION

1974 Actual \$381,000 1975 Estimate \$461,000 1976 Estimate \$502,000

	Base	Increase	Est.
(Dollars in thousands)	FY 1975 .	Requested	FY 1976
Number of Permanent Positions	23	2	25
11 Personnel Compensation	378	35	413
12 Personnel Benefits	32	3	35
21 Travel & Trans. of Persons	2		2
23 Rent, Comm. & Utilities	5		5
25 Other Services	37	2	39
26 Supplies and Materials	2	1	3
31 Equipment	5		5
TOTAL	461	41	502
Analysis of Increase			
Necessary Pay		15	
Program Funds		26	

ABSTRACT - Computer specialists, mathematicians, statisticians, and support personnel of the Information Systems Division (ISD) participate in the development and application of mathematical techniques such as statistical analysis, mathematical modeling, data reduction and cluster analysis, for research projects and automated administrative and collections management systems. An increase of 2 positions and \$26,000 is requested in FY 1976 to meet the following support needs: (1) an additional mathematician (\$12,000) and support funds (\$1,000) to meet an increasing demand for mathematical and statistical analysis assistance by curators and researchers in the areas of historical, biological, chemical, and geological research; and (2) a computer specialist (\$11,000) and support funds (\$2,000) to permit expanded use of ADP in the collections management and administrative areas. An additional amount of \$15,000 is requested for necessary pay.

PROGRAM - Computer specialists, mathematicians, and support personnel in ISD work with curators, historians, scientists, and management personnel to apply mathematical techniques to research problems and to develop automated administrative and collections management systems. Approximately 75 percent of the Division's resources are being expended in support of research and collections management while the remainder is used on management support functions. Work performed by ISD contributes annually to producing information that is published in approximately 100 scientific publications

Presently, to reduce development costs, scientific and collections management computer programs are being developed that can be utilized in many areas with minor modifications. The Division maintains a computer program library containing 350 active programs and is currently serving researchers, curators, and administrators throughout the Institution. The Smithsonian's main collections management system, SELGEM, has been distributed to 54 universities, government agencies, and other museums, representing valuable assistance to those institutions.

JUSTIFICATION OF \$26,000 INCREASE (Automatic Data Processing):

Scientific Research Applications - An increasing demand for mathematical and statistical analysis assistance by curators and researchers in the areas of historical, biological, chemical, and geological research has placed current resources under a

constant strain. Seven departments in the National Museum of Natural History and ten other bureaus are major users of these resources. Projects vary from the application of mathematical/statistical techniques to solve day-to-day research needs, to reducing large quantities of data from the electron microprobe equipment, to portraying research information in a graphic form. During FY 1976, the present staff of 4 will be involved with projects such as those concerned with ecological studies in temperate, semitropical and tropical regions of the world, analyses of ocean crust data, and modeling of terrestrial and lunar geology with data from joint American-Soviet scientific satellite missions.

The Institution initiated a study several years ago to develop data for a five-year ADP plan for the planning and efficient allocation of resources. This plan, which is updated annually, is based upon historical experience and projected needs in all areas of ADP usage. Based upon the recent update, a backlog of five man-years of effort is projected for FY 1976 in the area of research applications. Since it is estimated a mathematician can complete approximately two projects per month, this backlog is equivalent to approximately 120 projects. Backlogged projects will extend across the entire museum complex from art and anthropology to zoology. Additional staffing of 1 mathematician (\$12,000) and support funds of \$1,000 for equipment, supplies, training and computer time will reduce the projected backlog for FY 1976 to 4 man-years.

Collections Management and Administrative Applications - The SELGEM system is rapidly becoming recognized as a standard for the computerized management of collections. Current SELGEM development is centered on reducing processing costs and extending application of the system throughout the various museums to provide automated retrieval and indexing of data pertaining to the National Collections. Results benefit the professional staff by providing catalogues, cross-referencing indices by categories, correlation of data, better inventory control, and a future vehicle for responding to technical and non-technical queries by the research community or general public. Automated files now permit curators, researchers, and scientists to analyze, present, and interpret their data in ways that were impractical with manual files. The system also allows for an economical means of exchanging data via magnetic tape without physically transporting specimens or visiting other locations. In FY 1976, 7 man-years of effort is available for systems analysis, computer programming, program maintenance, documentation, and customer liaison in the collections management area.

To date approximately 2,000,000 specimens have been indexed into 292 distinct collections management files and 260 various processing requests are performed monthly against those files. From past experience it is estimated that 30 to 35 percent of a computer specialist's time is devoted to continual maintenance and liaison once a project is considered in production. Based upon the aforementioned five-year resource study a backlog of 4 man-years is projected for the collections management applications in FY 1976.

Administrative applications of ADP resources involve areas such as payroll, personnel, libraries, accounting, supply, public service, and plant and protection services. The 6 man-years of effort available to the above areas for systems analysis computer programming, program maintenance, documentation, and customer liaison, is projected to result in a 3 man-year backlog of work by FY 1976. Of major concern is the Institution's need to expand the use of ADP to energy conservation, facilities management, remote job entry processing, source data automation, teleprocessing, and security. The application of ADP to these areas will be of benefit to the entire Institution.

Staffing of 1 computer specialist (\$11,000) and support funds of \$2,000 for equipment, supplies, training, and computer time is requested to assist in reducing the backlogs in the collections management and administrative areas.

OFFICE OF SUPPLY SERVICES

1974 Actual......\$437,000 1975 Estimate.....\$492,000 1976 Estimate.....\$504,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	25	0	25
11 Personnel Compensation	310	11	321
12 Personnel Benefits	25	1	26
21 Travel & Trans. of Persons	2		2
23 Rent, Comm. & Utilities	10		10
24 Printing and Reproduction	1		1
25 Other Services	9		9
26 Supplies and Materials	132		132
31 Equipment	3		3
TOTAL	492	12	504
Analysis of Increase			
Necessary Pay		12	
Program Funds		0	

ABSTRACT - The Office of Supply Services procures supplies, materials, contractual services, and equipment for Smithsonian activities. No increase in program funds is sought for FY 1976. Funding in the amount of \$12,000 is sought for necessary pay for existing staff.

PROGRAM - The Office of Supply Services procures supplies, materials, contractual services, and equipment for research, curatorial, exhibit preparation, and other Smithsonian activities. It stocks and issues office and other supplies required in daily management operations and serves as a central receiving unit for the Institution. It operates a property management program, obtaining excess property in lieu of new procurement whenever possible. This Office also maintains all property records and schedules and oversees periodic inventories to insure adequate control, accountability, security, and utilization of equipment. In FY 1974, an estimated 500 contracts valued in excess of \$10,000,000 and approximately 8,700 procurement actions valued in excess of \$14,000,000 were handled by this office. Present information indicates an appreciable increase in workload in FY 1975.

MANAGEMENT ANALYSIS OFFICE

1974 Actual......\$190,000 1975 Estimate.....\$215,000 1976 Estimate.....\$222,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	10	0	10
11 Personnel Compensation	184	6	190
12 Personnel Benefits	16	1	17
23 Rent, Comm. & Utilities	7		7
24 Printing and Reproduction	1		1
25 Other Services	5		5
26 Supplies and Materials	2		2
TOTAL	215	7	222
Analysis of Increase			
Necessary Pay		7	
Program Funds		0	

ABSTRACT - The Management Analysis Office (MAO) performs a wide range of general management staff assistance and advisory services related to museum, research, and support operations in the Smithsonian. No program fund increase is requested for FY 1976. Necessary pay in the amount of \$7,000 is sought.

PROGRAM - Under the executive direction of the Director of Support Activities, the Management Analysis Office is responsible for assisting in the development, recommendation, and implementation of effective business administration and management improvement programs.

The Management Analysis Office provides management with a continuing appraisal of the written directives. MAO is responsible for the overall development and administration of the directives management system through which proposed Smithsonian procedures and policies are reviewed, coordinated, and approved by the Secretary before being disseminated and implemented.

The Office provides management advisory services; makes studies and special surveys for the evaluation and analysis of management problem areas. Management consultants provide specialized information to aid Smithsonian staff managers in such areas as the development of organizational, functional, staffing, and flow charts; planning and development of internal procedures; and implementation of management improvement programs.

The Management Analysis Office provides for the administration and management of a comprehensive and economical forms program for internal and external operations of the Smithsonian's various programs.

OFFICE OF PROTECTION SERVICES

1974 Actual......\$4,356,000 1975 Estimate.....\$5,546,000 1976 Estimate.....\$6,539,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	443	91	534
11 Personnel Compensation 12 Personnel Benefits 21 Travel & Trans. of Persons 23 Rent, Comm. & Utilities 25 Other Services 26 Supplies and Materials 31 Equipment	4,698 404 4 1 300 60 79	755 67 80 91	5,453 471 4 1 380 151 79
TOTAL	5,546	993	6,539
Analysis of Increase Necessary Pay Program Funds		218 775	

ABSTRACT - The Office of Protection Services (OPS) is responsible for the protection, security, health, and safety programs of the Institution. An increase of \$775,000 and 91 positions is requested to enable this office to fulfill its current responsibilities and to meet the increased responsibilities for two new museums. The areas covered by this requested increase are: (1) National Air and Space Museum - 55 guards (\$86,000) to protect the Museum as it readies for public opening, support funds of \$87,000, and \$202,000 for annualization of positions filled in FY 1975; (2) Cooper-Hewitt Museum - 14 guards (\$104,000) for three quarters of the year, support funds of \$14,000, and \$32,000 for security systems; and (3) Overall Protection and Support - 20 guards and 2 investigators (\$212,000) and support funds of \$38,000 to provide more adequate protection coverage for existing museums. An amount of \$218,000 is also sought for necessary pay.

PROGRAM - OPS has direct responsibility for protection, security, health, and safety for Smithsonian installations in the Mall vicinity, and policy responsibility for the entire Institution. The National Zoological Park has its own police and safety staff. Over the past four years, the gross area for which OPS has direct responsibility has increased by nearly one million square feet to a total of some four million square feet.

In FY 1975, several new facilities were added to the Institution for which OPS has protection and safety responsibilities: the new National Air and Space Museum, the Anacostia Museum's exhibit training facility, and the off-Mall consolidated service center on North Capitol Street replacing several other spaces not all of which were under Smithsonian protection. In addition, the Hirshhorn Museum and Sculpture Garden opened to the public in October, 1974. The public response to this art gallery has exceeded all expectations: during the first weekend alone, more than 30,000 people viewed the gallery's paintings and sculptures. Visitation through December 1974 totaled over 640,000 persons. This heavy response required OPS to provide guard resources originally planned for other museums.

While the number of misdemeanor and felonious incidents increased by 51 percent from calendar year 1972 to 1973 (232 as compared to 351), the increase from 1973 to 1974 was only 2 percent (351 as compared to 358). While the number of crimes against

the person (robbery, assault, sex offenses) increased by 87 percent from 1972 to 1973 (38 as compared to 71), the increase from 1973 to 1974 was only 1 percent (71 as compared to 72). The success in significantly lowering the rate of increase can be attributed in part to strategic plainclothes patrol of high crime areas and timely on-scene investigation of reported offenses. Additional training in the police field has resulted in more professional response by all protection officers and a higher resolution of incidents.

A pilot program for training protection officers for canine patrol service is underway. This program was begun without an increase in manpower. Canine-handling officers were drawn from the ranks of guards and policemen already on board. This program, which has proven highly successful among police units, is being modified for museum security with an anticipated result of further crime reduction and better utilization of manpower. The dogs, which are being trained to "sniff-out" both fires and stay-behinds after closing hours, are being donated to the Institution by private citizens.

The health and safety unit, which works closely with the security operations, is moving toward full compliance with Public Law 91-596 (Occupational Safety and Health Act of 1971). The unit also works with other units in coordinating construction and exhibition projects to ensure compliance with appropriate codes and regulations. During the first five months of FY 1974, the two Smithsonian health units served 8,297 people. During the same period of FY 1975, the three units served 8,989 people. The health units, during the fall and winter, conducted a campaign to encourage employees to have their blood pressure checked.

JUSTIFICATION OF \$775,000 INCREASE (Protection):

National Air and Space Museum - The initial increment of 30 positions for NASM protection will be hired in the last quarter of FY 1975. An additional amount of \$202,000 is required for annualization of funds for these positions. The final increment of 55 positions (bringing to 85 the total protection force) is requested for filling during the last quarter of FY 1976 (\$86,000). Support costs of \$87,000 cover purchase and maintenance of uniforms and purchase or rental of necessary security and protection equipment.

Cooper-Hewitt Museum - The Cooper-Hewitt Museum is scheduled to open in January, 1976. A total of 14 guards, including 2 supervisors, is required for three quarters of the year to protect the museum as the renovation nears completion, valuable objects are moved into the museum, and the museum opens to the public (\$104,000). Necessary support funds (\$14,000) as well as funds for rental and maintenance of security systems (\$32,000) also are requested.

Overall Protection and Support - An additional 22 positions (\$212,000) are requested to help fill the gap between the number of protection officers required for current museum, gallery, and other space and the number of positions currently available. Support funds of \$38,000 also are requested.

Manpower and budget requirements for guarding are based on the designation of "posts." A post may be either one point (e.g. an entrance to a museum) or an area, varying in size, based upon: the use of the area; the value of objects on display; the vulnerability of those objects to damage, theft, and vandalism; and the effective field of vision of the guard assigned to that post. The number of guards required to man one post may vary from one (the post must be manned 8 hours a day, five days a week) to five (the post must be manned 24 hours a day, 7 days a week). If all 91 positions requested in this budget are approved, it will bring the OPS total to 534. This will still leave OPS approximately 140 positions short for manning all currently designated posts. The shortage of 140 positions represents approximately 84 unmanned posts.

OFFICE OF FACILITIES PLANNING AND ENGINEERING SERVICES

1974 Actual......\$393,000 1975 Estimate.....\$574,000 1976 Estimate.....\$628,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	24	2	26
11 Personnel Compensation	427	47	474
12 Personnel Benefits	37	7	44
21 Travel & Trans. of Persons	11		11
24 Printing & Reproduction	6		6
25 Other Services	83		83
26 Supplies & Materials	6		6
31 Equipment	4		4
TOTAL	574	54	628
Analysis of Increase			
Necessary Pay		16	
Program Funds		38	

ABSTRACT - The Office of Facilities Planning and Engineering Services (OFPES) provides professional and technical services including planning, design, engineering, and project management for construction, alteration, improvement, and major repair programs required by the Smithsonian's physical plant and operational needs. An increase of 2 positions and \$38,000 is requested for necessary planning and construction cost estimating. A further \$16,000 is needed for necessary pay.

PROGRAM - Since its establishment as a separate entity in mid-FY 1974, OFPES has developed as a professional organization offering planning, design, engineering, and construction management services. During FY 1975 it is providing technical and/or supervisory services for more than 300 projects. These include repair, renovation, alteration, and construction jobs in Washington, D. C., New York City, Maryland, Arizona, and Panama. Major projects are the renovation of the Arts and Industries Building and the Carnegie Mansion, renovation of storage and service facilities, construction related to Bicentennial exhibits, planning for a museum support facility, and development of public cafeteria and education facilities in the Natural History Building.

JUSTIFICATION OF \$38,000 INCREASE (Buildings and Facilities Management) - The large number of buildings comprising the physical plant, many of which are old and of historical significance, require constant inspection, repair, and renovation work for their protection, for the safeguarding and exhibition of museum collections, and for the safety and accommodation of staff and visitors. Other projects, supportive of research and education efforts, add to the facilities planning and engineering workload. Effective design, engineering, and cost estimating are essential to accomplish projects on time, that meet objectives, and are within available funds. Two additional positions are required to augment the current technical and professional staff. A planner/designer (\$24,000) is needed to identify and spell-out the most efficient and effective methods for facilities development and utilization that will meet program objectives while maintaining historical accuracies and aesthetics. A second engineer/estimator (\$14,000) is required to develop and project construction costs. Accurate estimating and forecasting on a large number of diverse projects are most important in the changing and unsettled construction market.

OFFICE OF PLANT SERVICES

1974 Actual.........\$ 7,300,000 1975 Estimate......\$ 9,022,000 1976 Estimate......\$11,092,000

(Dollars in thousands)	Base FY 1975	Increase Requested	Est. FY 1976
Number of Permanent Positions	280	40	320
11 Personnel Compensation	3,727	525	4,252
12 Personnel Benefits	319	45	364
21 Travel & Trans. of Persons	6		6
23 Rent, Comm. & Utilities	4,058	1,454	5,512
24 Printing & Reproduction	3		3
25 Other Services	328	10	338
26 Supplies & Materials	506	25 -	531
31 Equipment	75	11	86
TOTAL	9,022	2,070	11,092
Analysis of Increase			
Necessary Pay		183	
Other Uncontrollable		538	
Program Funds		1,349	

ABSTRACT - The Office of Plant Services (OPLANTS) operates, maintains, and repairs ten museum and art gallery buildings and a number of other work and collections storage areas. It provides utilities, transportation, mail, telephone, and horticultural services in support of research, exhibit, education, and other public programs. An FY 1976 budget increase of \$1,349,000 is sought for the following Buildings and Facilities Management requirements: (1) National Air and Space Museum - 25 new positions, approximately 17 man-years, (\$197,000), and annualization of 5 positions (\$40,000) to operate, maintain, and provide communications and transportation services to the new building plus \$838,000 for the annual costs of utilities and telephone services; (2) General Mechanical Maintenance and Services - \$150,000 for 15 positions required for preventive and corrective maintenance of a valuable physical plant with \$46,000 for supplies, services, and equipment; and (3) \$78,000 to fund postal costs. An amount of \$183,000 is needed for necessary pay for present staff. An additional \$538,000 to fund higher utility rates is requested in the Uncontrollable Section (page A-5).

PROGRAM - OPLANTS operates, maintains, and repairs the Smithsonian's physical plant. This includes approximately four million square feet in 10 museums and art galleries. Services are provided also to other work and storage areas including space in leased facilities. Operational responsibilities for utilities funding and management include large and complex air-conditioning, heating, and ventilating systems and electric or electronic environmental controls and systems for the protection of buildings, visitors, natural history specimens, paintings, sculpture, and objects of American history and technology. Trade and craft assistance, such as carpentry, painting, and electrical work, is provided to hundreds of research projects, exhibition installations, and special public events every year. Packing, crating, warehousing, and moving services are provided for museum objects and collections.

Communications responsibilities include the management and funding of telephone installations and services handling some 250,000 long distance (FTS) and 1.4 million local calls annually and processing 850,000 pieces of outgoing mail and delivering 2.6 million pieces of incoming mail each year. Transportation services cover maintenance, repair, and operation of about 50 vehicles. OPLANTS also provides horticultural services to 75 acres of grounds and to building interiors.

A new management services concept has been instituted which covers effective and efficient work control and coordination, a vital part of work management. New supply procedures will improve the requisition, receipt, handling, storage, inventory, and issuing of approximately 10,000 line items. Inspection efforts will enable OPLANTS to identify and validate its backlog of essential maintenance and repair work and to improve custodial services. OPLANTS is also in the process of installing computermonitored power management systems to control electricity consumption and maintain levels of use below surcharge levels by carefully switching equipment on or off.

JUSTIFICATION OF \$1,349,000 INCREASE (Buildings and Facilities Management):

National Air and Space Museum - The National Air and Space Museum is scheduled for staff occupancy in the last quarter of 1975. In July 1976, after the public opening, workload calculations have shown that OPLANTS will require a total of 55 positions to operate and maintain heating, air-conditioning and humidity control systems; follow a preventive maintenance program on all installed mechanical equipment; provide telephone operator services; transport personnel and material; and handle mail and messenger services. In FY 1975, 5 mechanics were approved for one quarter to take over operations of the utilities systems. An amount of \$40,000 is required to annualize the funding of these five mechanics in FY 1976. In FY 1976 an additional 25 positions (\$197,000) will be required to operate the physical plant on a minimum scale and provide other support such as mail, messenger, telephone, and transportation services. Funds in the amount of \$838,000 are needed to pay the annual cost of utilities and communications. The remaining 25 positions will be requested in FY 1977 when the museum will be opened to the public.

General Mechanical Maintenance and Services - Several million square feet of space in buildings ranging in age from brand new, as in the case of the Hirshhorn Museum to well over 100 years old, as in the cases of the Smithsonian and Fine Arts and Portrait Galleries Buildings and wear and tear from some 15 million public visits create special maintenance and service problems. Additional air-conditioning, heating, and electrical systems for all Smithsonian buildings as well as expanded exhibit spaces have resulted in greater demands on trade, craft, and custodial personnel. Furthermore, reviews of the condition of the physical plant are disclosing that while building exteriors and public and work spaces may appear to the casual viewer as being in excellent condition, there are extensive requirements for preventive and corrective maintenance of plumbing, heating, electrical, and air-conditioning systems as well as routine care of roofs, masonry, and painted surfaces. These problems compound as new buildings are added since deterioration begins immediately. Prompt attention avoids future major costs.

Inflation in the costs of building supplies, materials, services, and equipment has eroded purchasing power for required staffing levels. Fifteen mechanic, trade, and craft positions cannot be funded and therefore have been dropped. For FY 1976, an amount of \$150,000 is requested to fund 15 replacement positions and thus expand the present level of preventive and corrective maintenance work to protect a physical plant valued at several hundred million dollars in replacement costs. Support cost funding of \$46,000 for building supplies and related items also is requested.

Postal Services - Continuous reviews, samplings, and tight controls are placed on mail services and use. These include restrictions on air mail service, consolidations of mailings, reviews of mailing lists, and use of proper mail classes. Yet interest in the Smithsonian continues to grow as evidenced by frequent newspaper coverage of events and a large number of public inquiries seeking information on research, exhibition, education, and other activities or asking for objects to be identified by the curatorial staff. This public interaction is sure to grow during the Bicentennial celebration period. About \$400,000 is now available to meet postage costs. A further \$78,000 is requested in the FY 1976 budget with no easing of control measures.

SALARIES AND EXPENSES

FY 1976 Estimate and July 1 - Sept. 30, 1976 Period

Activity	FY 1976 Estimate	July 1 - Sept. 30, 1976 Estimate
1. Science	\$29,976,000	\$ 8,184,000
2. History and Art	12,308,000	3,443,000
3. Public Service	2,236,000	623,000
4. National Museum Programs	5,752,000	1,443,000
5. Special Programs	5,785,000	1,639,000
6. Administrative and Support Activities	23,351,000	6,678,000
Totals	\$79,408,000	\$22,010,000

SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

For necessary expenses of the Smithsonian Institution, including research in the fields of art, science, and history; development, preservation, and documentation of the National Collections; presentation of public exhibits and performances; collection, preparation, dissemination, and exchange of information and publications; conduct of education, training, and museum assistance programs; maintenance, alteration, operation, and protection of buildings, facilities, and approaches; not to exceed \$100,000 for services as authorized by 5 U.S.C. 3109; purchase or rental of two passenger motor vehicles; purchase, rental, repair, and cleaning of uniforms for employees; \$67,789,000; Provided, That funds appropriated herein are available for advance payments to independent contractors performing research services or participating in official Smithsonian presentations.

\$79,408,000

For "Salaries and Expenses" for the period July 1, 1976, through September 30, 1976, \$22,010,000.

(20 U.S.C. 41 et seq.; Department of the Interior and Related Agencies Appropriation Act, 1975.)

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STANDARD FORM 300 July 1964, Bureau of the Budget Circular No. A-11, Revised.

SMITHSONIAN INSTITUTION SALARIES AND EXPENSES

PROGRAM AND FINANCING - TRANSITION PERIOD (in thousands of dollars)

Identification code 2-50-0100-0-1-503	19 actual	19 estimate	19 estimate
	July 1 -		
name Transcription	Sept. 30, 1976		
rogram by activities:			
1. Science	8,384		
2. History and Art			
3. Public Service			
4. National Museum Programs5. Special Programs			
6. Administrative and support	. 1,005		
activities	6,678		
Total program costs, funded	22,210		
Change in selected resources	200		
(undelivered orders)			
Total obligations	22,010		
nancing:			
Budget authority (appropriation)	22,010		
elation of obligations to outlays:			
Obligations incurred, net	22,010		
Obligated balance, start of period.	20,598		
Obligated balance, end of period	- 18,988		
Outlays	23,620		
	,		

Justification for Transition Period

The period July 1 - September 30, 1976, represents the second half of peak Bicentennial presentation activity with all program and support units in the Washington, D.C. area--some 10 major museums and art galleries, the National Zoological Park, and supporting service units--heavily committed to meeting and responding to a heavy public visitation which will have needs for information, orientation, custodial services, protection, and safety. Reflecting the unusual public service requirements of this period, the budget estimates for the following six component activities range from 25 percent to 29 percent (the average is 27 percent) of their FY 1976 estimates.

<u>Science</u>.....\$8,184,000

The estimate for the science activity is 27 percent of the FY 1976 budget level and will be used to fund 10 major organization units. It includes the programs of the National Air and Space Museum (opening to the public in its new building on July 4, 1976), the National Zoological Park with major new public attractions, such as the lion and tiger exhibit, and the National Museum of Natural History with special Bicentennial displays and new public cafeteria and education facilities.

The budget estimate also provides for continuing programs of research, documentation, and education in anthropology, including American Indian studies, astrophysics and earth sciences, and temperate and tropical biology which will result in new understanding of man, his natural surroundings, and their relationships. Museum collections will be curated and preserved for study and important natural areas in Panama and on the Chesapeake Bay will be maintained and protected for use by staff and visiting students and scholars.

<u>History and Art....</u>\$3,443,000

About 28 percent of the FY 1976 estimate also will be productively applied to the important cultural resources represented by six museums of art, history, and technology including the National Museum of History and Technology, Freer Gallery of Art, National Collection of Fine Arts, National Portrait Gallery, Hirshhorn Museum and Sculpture Garden, and the Cooper-Hewitt Museum. Related archival and scholarly efforts will be continued. Collections will be documented, given proper care, and put to effective use in responding to public inquiries and providing the basis for a wide variety of publications by staff and outside users. All museums will be in full operation with an outstanding array of exhibitions, related presentations and supportive orientation, education, and tour activities. Special school service and outreach efforts will be available.

<u>Public Service.....</u>\$623,000

Public service activities, particularly the Anacostia Neighborhood Museum with its new exhibits training and production laboratory for underprivileged and underutilized persons, the Division of Performing Arts which presents the Folklife Festival, and the Office of Public Affairs, will be very much involved in the Bicentennial effort. The international exchange of publications and the editing, design, and production of Smithsonian research reports and catalogues will be continued during this period. The transition period estimate is 28 percent of the FY 1976 budget estimate for these activities.

National Museum Programs.....\$1,443,000

During this period important behind the scenes support activities and services to the national museum community will be sustained. The requested funding is 25 percent

of the FY 1976 level. The Conservation Analytical Laboratory will study museum objects and undertake preventive and remedial measures to guard against their deterioration and loss. Public inquiries to the Smithsonian's Archives and Libraries will rise with the influx of visitors and generally heightened interest in American history, technology, and cultural achievements. The Traveling Exhibition Service will be circulating several hundred exhibits across the nation. Grants to the museum profession for training, research in conservation and other techniques, for the preparation of technical publications, and for related purposes will be provided under the National Museum Act.

<u>Special Programs</u>.....\$1,639,000

Transition period funding at 28 percent of the FY 1976 estimate is required primarily to present and support special Bicentennial efforts, most notably during this period, the actual operations of the summer-long Festival of American Folklife on the Washington Mall and the printing of the landmark Encyclopedia of North American Indians. Savings will be realized from the completion of the Major Exhibition Program project for the National Air and Space Museum in FY 1976. Pre- and postdoctoral fellowships, research grants for significant investigations, and special environmental studies will be continued.

Administrative and Support Activities......\$6,678,000

Central administration and direction and associated professional and technical support from legal counsel; financial, personnel, and procurement management; auditing; data processing; equal opportunity development; and plant engineering services will be continued at FY 1976 estimated levels. Protection, custodial, and buildings maintenance activities will be stongly in demand as a result of Bicentennial visitation. The budget estimate is about 29 percent of the overall FY 1976 estimate reflecting this peaking of summer activity.



Tab B

SCIENCE INFORMATION EXCHANGE



SMITHSONIAN SCIENCE INFORMATION EXCHANGE

1974	Actual\$1,695,000
1975	Actual\$1,695,000 Estimate\$1,805,000/1
1976	Estimate\$1.875.000

The Smithsonian Science Information Exchange (SSIE) has served for more than 25 years as a national center for information on research in progress and now operates the largest and most modern information system of its kind in the world. The Exchange collects, indexes, stores, and retrieves information about ongoing research projects in all areas of basic and applied research in the life, physical, behavioral, and engineering sciences. This information is used by an increasing number of scientists, research managers, and administrators to keep abreast of current research, help avoid unwarranted duplication of effort, evaluate existing research activities, and plan new research programs.

SSIE's data base has grown steadily and the currently active file now averages some 190,000 projects. The Exchange adds and updates information on more than 110,000 projects each year. Project summaries are received on Federally supported research as well as on research supported by non-Federal organizations, such as private foundations, fund raising associations, state and local government, and private industry. Foreign research in areas of high national interest is also incorporated into the data base. Such information from non-Federal sources has proven to be extremely useful in the management of U.S. research currently being supported by the Federal government.

The Exchange not only serves its users directly, but furnishes data to a number of specialized information centers such as the Transportation Research Information Service, the National Clearinghouse for Smoking and Health, the Water Information Center, and the ERIC Clearinghouse for Social Science Education as well. These centers cover both ongoing and completed research in a wide range of subject areas. They reach an even wider total audience than does the Exchange through its direct user service program.

Information in the Exchange's data base is used also to prepare catalogues of ongoing work in specific areas, such as water resources, pesticides, health services, disaster assistance, marine sciences, and dental research. Catalogues of ongoing research are published and distributed by Federal agencies in increasing numbers and areas of interest (Table I). They make information available to large users on a significantly broader scale than is possible in response to individual information requests made to the Exchange. Still, in FY 1975, the Exchange will provide well over a half million summaries of research in progress in response to specific requests, not including the information available to users from catalogues and the specialized information centers.

In addition to the more traditional uses of the SSIE system, the Exchange has recently been asked to work with policy makers in a number of Federal agencies to explore ways in which its resources might be more effectively applied to the information requirements of high priority national programs. One important product of this effort has been the designation of SSIE by the National Cancer Institute as a Current Cancer Research Project Analysis Center under the International Cancer Research Data Bank program. Another is the compilation of a directory of international energy research in progress, in support of a Department of State evaluation of alternatives for U.S. initiatives for international cooperation in energy R&D.

These output services, as well as the more routine information products which are regularly provided, are paid for by SSIE users. SSIE's Federal support provides for performance of the data analysis and storage operations necessary to make possible the rapid and efficient retrieval of information in response to the needs of the nation's

^{/1} Includes requested pay supplemental appropriation of \$50,000.

TABLE I

SSIE Usage by Major Categories of Service

(by Fiscal Year)

		Rej	Report Volume	(000 Notices		User	r Support(\$	(\$)
Category of Service			1973	1974	1975 -	1973	1974	1.975
Request for Subject Information	Custom Subject Searches Selective Dissemination Research Inform. Package Historical Searches On-line Searches	Federal Non-Federal Total	76.9 238.7 315.6	129.1 431.6 560.7	183.5 415.2 598.7	48,884 110,788 159.672	70,505 191,974 262,479	99,994 180,468 280,462
Requests for Administra- tive Informa- tion	Investigator Searches Searches by Document Number Automatic Distribution	Federal Non-Federal Total	32.6	33.6 1.0 34.6	48.7	8,241 581 8,822	7,090	8,316 1,094 9,410
Catalogues, Compila- tions Processing Services, etc.	Negotiated Requests Contracts	Federal Non-Federal Total	NA NA NA	NA NA NA	NA NA NA	138,930 122,753 261,683	106,979 44,443 151,422	413,510 96,618 510,128
			Total Us	Total User Income		430,177 422,548	422,548	800,000

65%

77%

797

" Federal Usage

^{1/} Projected based on six months experience

Includes funding for operation of the Current Cancer Research Information Analysis Center for the National Cancer Institute. 2

research community. This support covers the efforts required to assure a steady flow of information into the Exchange, the registration and entry of data into SSIE's computerized data base, the development and maintenance of input processing systems, and the multi-disciplinary classification of research project information by scientists necessary for the Exchange to meet a broad range of demands for information services.

The effect of these demands on SSIE input operations can be most clearly expressed in terms of the ongoing research information requirements of programs of high national priority such as the National Cancer Plan and Project Independence. More comprehensive coverage, more timely data, and more rapid input processing are input improvements seen by administrators and program managers as necessary precursors to the more effective application of SSIE resources to the problems of program implementation and management.

In spite of agency support for the services sought, demands on SSIE input operations have increased. Input volume rose by 21 percent in FY 1974, and an additional 10-15 percent increase is being experienced in FY 1975. Preliminary projections for 1976 indicate a still further increase. Moreover, under Federal Revenue Sharing, more and more resources provided to state and local governments are being directed toward research programs which address problems local in scope but common in nature. Within these programs, the avoidance of unwarranted duplication of research and the sharing of information and expertise require the availability of comprehensive ongoing research information from a central source.

Within the resources it has had available, SSIE has been able to capitalize on new techniques for improving input into its data base and to make it as current for searching as possible. Development and implementation of a system of computer-assisted indexing is expected to reduce the time required for input processing and to free professional staff resources for conceptual indexing and improvement of the SSIE classification system. Conversion by large supporting agencies from hard copy to magnetic tape input has also relieved some of the registration backlog which has accumulated.

Further improvement is needed, however, in order to support more effectively programs of high national concern and to serve better the information needs of state and local governments. SSIE is seeking an increase in Federal support in FY 1976, which it has been able to hold to \$70,000 in spite of the impact of rapidly rising operating expenses, to improve selectively input and processing time in subject areas of critical concern and to expand its efforts to encourage and provide for new state and local input into the SSIE system. In the former case, funds will be applied toward further development and implementation of the SSIE machine-assisted indexing system. In the latter, SSIE will work with organizations such as the Council of State Governments, the National Conference of State Legislatures, and the National Governors' Conference to begin to develop mechanisms and procedures for collection, input, and delivery of ongoing research information.

The estimated budget for FY 1976 follows:

Personnel	Total Cost of Operations \$1,934,000	Federal Support Requested \$1,385,000	User Support Expected \$549,000
Rents (building, space,			
computer, etc.)	449,000	313,000	136,000
Printing	70,000	3,000	67,000
Services	121,000	42,000	79,000
Supplies	48,000	24,000	24,000
Equipment	3,000	-	3,000
Total	\$2,625,000	\$1,767,000	\$858,000
SI Services	150,000	108,000	42,000
Grand Total	\$2,775,000	\$1,875,000	\$900,000

SMITHSONIAN SCIENCE INFORMATION EXCHANGE

FY 1976 Estimate and July 1 - Sept. 30, 1976 Period

Activity	FY 1976 Estimate	July 1 - Sept. 30, 1976 Estimate
Science Information Exchange	\$1,875,000	\$500,000

SMITHSONIAN INSTITUTION

SCIENCE INFORMATION EXCHANGE

For necessary expenses of the Science Information Exchange, \$1,875,000 \$1,755,000

For "Science Information Exchange" for the period July 1, 1976, through September 30, 1976, \$500,000.

(20 U.S.C. 41 et seq.; Department of the Interior and Related Agencies Appropriation Act, 1975.)

Type size: 8 point 22 picas Case 180. Red underscore Case 210 STANDARD FORM 300 July 1964, Bureau of the Budget Circular No. A-11, Revised.

SMITHSONIAN INSTITUTION SCIENCE INFORMATION EXCHANGE

PROGRAM AND FINANCING - TRANSITION PERIOD (in thousands of dollars)

Identification code	19 actual	19 estimate	19 estimate
2-50-0103-0-1-503	July 1 - Sept. 30, 1976		
rogram by activities:			
O Science Information Exchange (costs - obligations)	500		
inancing:			
0 Budget authority (appropriation)	500		
elation of obligations to outlays: 1 Obligations incurred, net 2 Obligated balance, start of peri			
4 Obligated balance, end of period	- 139		
0 Outlays	465		
·			

Justification for Transition Period

Science Information Exchange \$500,000

Funds requested for the period July 1, 1976 - September 30, 1976, slightly more than 25 percent of the FY 1976 estimate reflecting rising prices for services and supplies, will sustain data acquisition and storage operations to maintain continuity and comprehensiveness of information on research projects in progress as a service to the research community.



Tab C

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)



SMITHSONIAN INSTITUTION MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

1974	Appropriation\$4,500,000	
1975	Appropriation\$2,000,000	Equivalent in Excess
1976	Estimate\$2,000,000	Foreign Currencies

An appropriation of \$2,000,000 in foreign currencies determined by the Treasury Department to be in excess of the normal needs of the United States is requested for FY 1976. The appropriation will be used for two general purposes:

1) To continue a program of grants to United States institutions for field research in those countries where excess local currencies are available in the following general areas:

Obligations of Funds by Program Area (dollar equivalents)

	FY 1974 Obligations	FY 1975 Estimated Obligations	FY 1976 Estimated Obligations
Archeology and Related Disciplines	\$1,331,000	\$ 772,000	\$ 313,000
Systematic and Environmental Biology	1,420,000	970,000	477,000
Astrophysics and Earth Sciences	86,000	115,000	267,000
Museum Programs	91,000	370,000	18,000
Grant Administration	102,000	83,000	37,000
Transfer to NSFScience Information Program	140,000	95,000	·
Total	\$3,170,000	\$2,405,000	\$1,112,000

2) To make the third of four annual payments, each of \$1,000,000 equivalent in excess Egyptian pounds, which together would constitute the United States' contribution to the International Campaign to Save the Monuments of Nubia which are inundated by Nile River waters regulated by the Aswan Dam. These payments would support the preservation of the monuments on the Island of Philae in Egypt as proposed by President Kennedy in his letter to the Congress dated April 6, 1961.

THE PROGRAM OF GRANTS FOR FIELD RESEARCH

The purposes of the Special Foreign Currency Program (SFCP) are consonant with the Smithsonian Institution's stated objective, "... the increase and diffusion of knowledge among men." The Program receives project proposals from United States institutions and supports those which it judges most likely to contribute to that objective. To assist in the process of selection, the SFCP consults preeminent scholars who advise on the scientific quality of each project, on its feasibility, and on the qualifications of its proponents.

In addition to pursuing its primary objective, the Program through its research awards contributes to strengthening universities, museums, and other institutions of higher learning both in the United States and in the host countries. The research projects also promote transnational scientific and cultural cooperation among United States and foreign scientists and institutions with a resulting benefit to international relations that, although difficult to quantify, is undoubtedly real.

In FY 1974, participation in the SFCP foreign research projects involved about 370 American scientists from 46 United States institutions in 32 states. Over 45 additional scientific publications were reported, raising the Program's accumulative total to 507.

SIGNIFICANT PROJECTS

Utah State University, which has been the headquarters of United States Desert Biome Research under the International Biological Program, is applying the plan developed in the course of studies of deserts in the United States to the encroaching desert fringe in southern Tunisia. Research is expected to provide insight into the pressing problem of loss of arable land. Of special scientific interest is the opportunity to measure the human role in this ecosystem, which is possible because of the unique isolation of the human population.

The American Institute of Indian Studies, with headquarters at the University of Chicago, has received grants in excess Indian rupees since 1968 to support the development of American scholarly competence in the study of India chiefly in the fields of archeology and related disciplines. The Institute is a consortium of 28 American colleges and universities in which teaching and research on India are a part of the academic program at the undergraduate or graduate levels. One hundred twenty-eight research awards have been made to the Institute.

The University of Michigan operates a world-renowned laboratory for the study of snails, some of which transmit human diseases like schistosomiasis which is considered with malaria and hookworm to be one of the greatest parasitic scourges of mankind. The initial step in learning to control the disease is to identify the snails and to understand their life cycles. To this end, the University has joined Ain Shams University in Cairo in establishing a regional laboratory where specimens collected all over Africa are brought for study.

SFCP IN RELATION TO THE U.S. TAXPAYER

The excess foreign currencies utilized by the SFCP were largely generated years ago by sales of United States agricultural commodities. Their use has no current effect on the U. S. taxpayer. They are not dollars but are local currencies that can be spent only for selected purposes in selected countries. It is also important to note that in some of these countries, such as India and Pakistan, the purchasing power of the local currency, and hence of the U.S.-owned funds, is falling with increasing rapidity every year. In those two countries, the currencies have shown a loss of about 50 percent since 1966, and half of this loss has occurred since 1973.

THIRD U.S. CONTRIBUTION TO THE SALVAGE OF THE MONUMENTS OF NUBIA

The Smithsonian is seeking a continued appropriation of \$1,000,000 equivalent in excess Egyptian pounds to help preserve the temples on the Island of Philae which have been inundated by Nile River waters regulated by the Aswan Dam. The contribution of \$1,000,000 would be the third of four equal annual appropriations which together would constitute the total 'United States' contribution to UNESCO's international campaign for the safeguarding of the Nubian Monuments.

The International Campaign was undertaken in 1960 at the request of the Governments of Egypt and Sudan. President John F. Kennedy said in his letter of April 6, 1961 to the Congress in response to Public Law 86-472 that he considered it "to be in the interest of the United States to assist in rescuing these historic remains of a former civilization from destruction..." Funds contributed are placed in a trust fund devoted exclusively to the study, salvage, and preservation of the archeological monuments of Nubia.

The total cost of the program to salvage the monuments on the Island of Philae will probably exceed \$16,000,000 in convertible and local currencies. As of July 12,1974, some \$8,500,000 of this total had already been pledged by other nations. In addition, Egypt has undertaken to meet one-third of the project's total cost.

The salvage plan, adopted with the advice and concurrence of an American engineer, provides for a coffer dam to be erected around the Island of Philae to permit the lowering of the water for removal of the temples. They are to be erected on the nearby Island of Agilkia in a setting like the original one. There they will be higher and safe from further erosion by the river and accessible to all.

Work has progressed satisfactorily. The United States representative on the Group of Archeologists and Landscape Architects for Safeguarding the Philae Temples reports that in December 1974 the coffer dam had been completed, the water level lowered to the level necessary to permit the removal of the temples, the photogrammetry of the temples had been completed, and the archeology of the island and the temples had been started. The leveling of the surface of the Island of Agilkia is taking longer than had been anticipated primarily because of the unanticipated hardness of the stone which must be removed to prepare an appropriate site for the temples.

Obligation	of	Total	SFCP	Funds	bу	Country
	(do:	llar e	quiva	lents)		

	FY 1974	FY 1975	FY 1976
	Actual	Estimate /1	Estimate /1
Egypt	\$1,769,000	\$1,538,000	\$1,090,000
India	396,000	535,000	293,000
Pakistan	387,000	295,000	195,000
Poland	428,000	486,000	230,000
Tunisia	703,000	551,000	304,000
Yugoslavia 74	486,000	 /1	/1
TOTAL	\$4,170,000	\$3,405,000	\$2,112,000

^{/1} Includes payment to the UNESCO trust fund of \$1,000,000 equivalent excess Egyptian pounds for the International Campaign to Save the Monuments of Nubia.

^{/2} Includes \$70,000 equivalent transferred to the NSF Science Information Program.

Includes \$95,000 equivalent transferred to the NSF Science Information Program.

STATUS OF SMITHSONIAN SFCP FUNDS (dollar equivalents)

	FY 1974 Actual	FY 1975 Estimated	FY 1976 Estimated
Unobligated Balance, Start of year	\$ 783,000	\$1,327,000	\$ 149,000
Appropriation	4,500,000	2,000,000	2,000,000
Recovery of Prior Years' Obligations	214,000	227,000	100,000
Unobligated Balances, End of year	-1,327,000	-149,000	137,000
Total Obligations	\$4,170,000	\$3,405,000	\$2,112,000

Smithsonian Foreign Currency Program Grants Awarded in Fiscal Year 1974

ARCHEOLOGY AND RELATED DISCIPLINES

American Institute of Indian Studies, Philadelphia, Pennsylvania. Continued support for administration, Benares Center for Art and Archeology, and research fellowships (India).

American Museum of Natural History. New York, New York. Excavation at the Harappan site of Allahdino in the Malir Area, Karachi District, Pakistan.

American Research Center in Egypt, Princeton, New Jersey. Continued support for a program of research and excavation in Egypt: support for operation of the Cairo Center, fellowship support, maintenance of archeological research at the site of Hierakonpolis (Nekhen) in Edfu District, survey of Arabic scientific manuscripts in Cairo, maintenance of a stratified pharonic site in the Egyptian delta at Mendes, Akhenaten Temple project, research in modern Arabic literature, continuation of an epigraphic and architectural survey at Luxor of the Oriental Institute, feasibility of clearing, conserving, and recording the tomb of King Ramesses II in the Valley of the Kings, an egyptological conference, editing the Nag Hammadi codices.

Boston University, Boston, Massachusetts. Archeological excavations at Stobi (Yugoslavia).

Dumbarton Oaks Center for Byzantine Studies, Washington, D.C. A corpus of the ancient mosaics of Tunisia.

Smithsonian Institution, Department of Anthropology, Washington, D.C. Helmand-Sistan projects: studies of historical ecology.

Southern Methodist University, Dallas, Texas. The Pleistocene sediments of the Nile Valley, Egypt.

State University of New York at Buffalo, New York. Investigations on the Neolithic sites in Southeastern Poland.

University of California, Berkeley, California. Archeological excavations at the Harappan Seaport of Balakot, Pakistan.

University of Minnesota, Minnesota, Minnesota. Excavations in Diocletian's Palace at Split, Yugoslavia.

University of Missouri, Columbia, Missouri. Research and study of Early Medieval Polish archeology.

University of Pennsylvania, University Museum, Philadelphia, Pennsylvania. The Dira Abu el-Naga project (Egypt).

University of Pennsylvania, University Museum, Philadelphia, Pennsylvania. Excavation within the town and harbour site of Malkata, Western Thebes (Egypt).

MUSEUM PROGRAMS

Smithsonian Institution, Department of Science and Technology, Washington, D.C. Publication in Islamic medicine in the thirteenth century (Egypt).

Smithsonian Institution, Office of Museum Programs, Washington, D.C. Publication of ICOM's The Protection of Cultural Property: handbook of national legislations.

Smithsonian Institution, Traveling Exhibition Service, Washington, D.C. Study and exhibition of Wissa Wassef tapestries from Egypt.

SYSTEMATIC AND ENVIRONMENTAL BIOLOGY (INCLUDING PALEOBIOLOGY)

Academy of Natural Sciences, Philadelphia, Pennsylvania. Biochemical investigations of diploid and triploid frogs of the Rana esculenta complex (Poland).

Duke University, Durham, North Carolina. Exploitation of habitats by chemically differentiated races of morphologically uniform lichen-forming fungi (Tunisia).

Harvard University, Museum of Comparative Zoology, Cambridge, Massachusetts. Study of the dentition of Cretaceous mammals of Mongolia (Poland).

Howard University, Washington, D.C. Cenozoic mammals of Pakistan.

Smithsonian Institution, Department of Botany, Washington, D.C. Revision of *Trimen's Handbook to the Flora of Ceylon*.

Smithsonian Institution, Department of Paleobiology, Washington, D.C. Comparative study and geography of selected Devonian and Permian corals in Poland and the U.S.A.

Smithsonian Institution, Office of International and Environmental Programs, Washington, D.C. Limnological investigations of Lake Ohrid (Yugoslavia), limnological investigations of Skadar Lake (Yugoslavia), Mediterranean Marine Sorting Center (Tunisia).

Smithsonian Institution, Tropical Research Institute, Balboa, Canal Zone. Ecology of freshwater lakes in Panama (Poland).

Texas Tech University, Lubbock, Texas. Mammals of the Adriatic islands and adjacent mainland of Yugoslavia.

University of California, Berkeley, California. A biosystematic comparison of the siphonocladales (Chlorophyta) (Tunisia).

University of California, Berkeley, California. Comparative study of Late Cretaceous Mongolian and North American mammals (Poland).

University of Michigan, Ann Arbor, Michigan. Systematic studies of the molluscan genus *Bulinus* in Africa and adjacent regions (Egypt).

University of Utah, Salt Lake City, Utah. The evolution of optimal reproductive strategies (India).

Utah State University, Logan, Utah. Systems analysis of the PreSaharan ecosystem of Southern Tunisia.

Yale University, New Haven, Connecticut. Paleoanthropology, paleontology, and stratigraphy of Neogene localities in Pakistan.

ASTROPHYSICS AND EARTH SCIENCES

Duke University, Durham, North Carolina. Studies in Lake of Tunis.

Smithsonian Institution, Astrophysical Observatory, Cambridge, Massachusetts. Operation of the Uttar Pradesh State Observing Station at Naini Tal (India).

Smithsonian Institution, Department of Mineral Sciences, Washington, D.C. Lonar Meteorite Crater project (India).

University of **Washington**, Seattle, Washington. Color magnitude diagrams for young star clusters in magellanic clouds (Poland).

MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

FY 1976 Estimate and July 1 - Sept. 30, 1976 Period

<u>Activity</u>	FY 1976 Estimate	July 1 - Sept. 30, 1976 Estimate
Grants for museum programs and related research in the natural and physical sciences and cultural history	\$2,000,000	\$750,000

SMITHSONIAN INSTITUTION

MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

For payments in foreign currencies which the Treasury Department shall determine to be excess to the normal requirements of the United States, for necessary expenses for carrying out museum programs, scientific and cultural research, and related educational activities, as authorized by law. \$2,000,000, to remain available until expended and to be available only to United States institutions: Provided, That this appropriation shall be available, in addition to other appropriations to the Smithsonian Institution, for payments in the foregoing currencies: Provided further, That not to exceed \$1,000,000 shall be available to the Smithsonian Institution for the International Campaign To Save the Monuments of Nubia of the United Nations Educational, Scientific, and Cultural Organization for the salvage of archeological sites on the Island of Philae.

For "Museum Programs and Related Research (Special Foreign Currency Program)" for the period July 1, 1976, through September 30, 1976, \$750,000.

(20 U.S.C. 41 et seq.; Department of the Interior and Related Agencies Appropriation Act, 1975.)

Type size: S point 22 picas Case 180. Red underscore Case 210 STANDARD FORM 300 July 1964, Bureau of the Budget Circular No. A-11, Revised.

SMITHSONIAN INSTITUTION MUSEUM PROGRAMS AND RELATED RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

PROGRAM AND FINANCING - TRANSITION PERIOD (in thousands of dollars)

(in thousands	of dollars)		
ion code 50-0102-0-1-503	19 actual	19 estimate	19 estimat
	July 1-		
	Sept. 30, 1976		
n by activities:			
ts for museum programs and related search in the natural sciences cultural history			
cogram costs - funded)	1,550		
ge in selected resources ndelivered orders)	- 800		
cal obligations	750		
ing:			
lget Authority (appropriation)	750		
on of obligations to outlays: ligations incurred, net ligated balance, start of period ligated balance, end of period	750 3,302 - 3,252		
:lays	800		
	1		

Justification for Transition Period

Special Foreign Currency Program \$750,000

This appropriation, about one-third of the FY 1976 level, will continue a program of grants to United States institutions for field research in those countries where "excess" local currencies are available. Research will be performed in archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences, and in museum and other cultural activities.

Tab D

FACILITIES PLANNING, RENOVATION, RESTORATION,
AND CONSTRUCTION



FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

Summary

	Fiscal Years			Transition	
Current Programs	1974 Appropriation	1975 Appropriation	1976 Estimate	Period Estimate	
Construction and Improvements, National Zoological Park	\$3,790,000	\$9,420,000	\$9,550,000	\$1,440,000	
Restoration and Renovation of Buildings	1,070,000	1,490,000	1,467,000	400,000	
Construction, National Air and Space Museum	17,000,000	7,000,000	3,000,000		
Totals	\$21,860,000	\$17,910,000	\$14,017,000	\$1,840,000	

The FY 1976 appropriation requested for <u>Construction and Improvements</u>, <u>National Zoological Park</u> will allow progress to be sustained on the implementation of the approved <u>Master Plan</u> for the improvement of the Zoo's animal and public facilities and essential repairs and additions to existing facilities. Work to be accomplished includes completion of the service facility and the construction and rehabilitation of bear exhibits; the continued planning for beaver, otter, seal, sea lion, and wolf exhibits; the design and installation of exhibit, orientation, and education graphics and street furniture; and a program of repairs and renovation of Zoo facilities in Rock Creek and at Front Royal, Virginia. Transition period funding will sustain planning and construction on Central Area exhibits and provide for a continued program of repairs and improvements to existing facilities.

The FY 1976 appropriation sought for <u>Restoration and Renovation of Buildings</u> emphasizes continuing projects including road improvements at the Mt. Hopkins, Arizona, Observatory, the installation of fire detection and suppression systems, renovation of the Arts and Industries Building and the Smithsonian Building south yard, the completion of planning for a sixth floor library and research center addition to the History and Technology Building, and general repairs and improvements to buildings and facilities. The requested transition period funding will sustain the facility maintenance effort.

The FY 1976 appropriation for <u>Construction</u>, <u>National Air and Space Museum</u> will complete the liquidation of the contract authority provided in FY 1973.

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

1974	Appropriation\$3,790,000
1975	Appropriation\$9,420,000
1976	Estimate\$9,550,000

This appropriation is used to fund repairs, alterations, and improvements to existing facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations, and new construction implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973.

The requested FY 1976 appropriation will be applied as follows.

General Service & Parking Facilities Lower Rock Creek Valley Beaver Valley Graphics	\$4,550,000 3,000,000 490,000 100,000
Renovation and Repair Front Royal, Virginia, Conservation Center Renovation Total	650,000 760,000 \$9,550,000

Background

The National Zoological Park (NZP) was established in 1890 under the Board of Regents of the Smithsonian Institution who were authorized to "administer and improve" the Zoo for "the advancement of science and the instruction and recreation of the people" (20 U.S.C. 81). The NZP has two locations. Exhibition and education functions have been centered since 1890 on some 150 acres in Washington, D. C.'s Rock Creek Valley. At present there are on display some 2,835 animals and birds of 600 different species. Complementary animal conservation and breeding functions (to be done in collaboration with other zoos) are now being developed on about 3,000 acres of Federal land near Front Royal, Virginia.

Why Does the NZP Need to be Improved?

There are several principal reasons why the Zoo must be renovated.

It is the National Zoo of the United States yet has fallen far behind many other United States and foreign zoos in terms of adequate facilities. Approximately half of its millions of annual visitors come from outside the Washington Metropolitan area. Many of its visitors are from foreign countries, and the Zoo is the official repository for many foreign gifts of rare and valuable animals as well as gifts from public-spirited Americans.

The Zoo has an aged and crumbling physical plant. Animals, employees, and visitors are housed and served in facilities that date from 1805 with most of the plant having been constructed between 1902 and 1937. Repairs are difficult and expensive.

Animal facilities fall far short of acceptable modern standards for care, health, breeding, and research for conservation of rare and endangered species. Known requirements of animals, both physiological and psychological, are not being met by present housing. The accelerating extinction of many species means that zoos must manage and study their animals in such a way as to maximize reproduction and to contribute to knowledge that will assist management in the wild to help survival.

The education potential of the National Zoo is not being met by the cramped, unnatural cages which were in style 50 or more years ago. Today's public should not be asked to accept inadequate, outmoded housing of animals which neither serves the animals nor meets the needs of a more aware, conservation-minded, and environmentally-conscious public.

The requirements of a growing number of visitors for parking (the Zoo is not now, nor will it be under Metro, adequately served by public transportation), orientation and school education facilities, food service, adequate restrooms, first aid, and other services to make their visits pleasant and instructive are not being met. Facilities designed for an 1890 horse and carriage population are woefully inadequate to handle present day crowds. Present day automobile traffic is chaotic. Utilities that were serviceable 50 years ago do not meet today's needs.

Administrative, crafts and trades, animal keeper, commissary, police, and other essential and dedicated staff are scattered throughout the Zoo in inefficient and hazardous structures not designed for today's uses. Work effectiveness and morale suffer.

Has Any Progress Been Made on Corrective Action?

A renovation program was initiated in the early 1960's and some improvements have been made since then. Except for the most urgent repairs and very limited planning efforts, the program ground to a halt between about 1968 and 1972 during the Vietnam period.

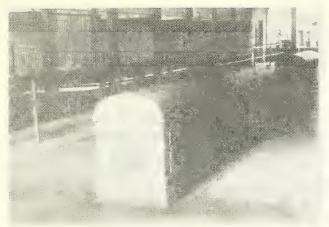
New access roads and parking lots have been constructed and automobile traffic has been largely removed from the central exhibit area of the Zoo (an additional 12 acres of prime animal and visitor space would be regained by the construction of the general service and parking facility). The heating plant has been converted from hand firing and the sewage system has been modernized to meet public health standards. The 1926 Bird House was renovated and a separate walk-through flight cage completed in 1964. Repair projects (such as walks, roofs, and guardrails) have been undertaken to attempt to keep the Zoo operational and safe.

The deer and hoofed-stock area was redeveloped and five additional acres put to use resulting in much larger quarters for the zebra, antelope, and oxen. The Hospital and Research Building was finished in 1969. The pandas arrived in 1972 and are now well-housed in a renovated hoofed-stock building. The 1904 Monkey House is now being remodeled with larger cages and other animal and visitor improvements. Very recently, the 1890 Lion House was demolished. With \$3,000,000 appropriated in 1974 a modern moated exhibition facility for lions and tigers is now under construction. This year, with \$2,970,000 appropriated, work is underway on the Elephant House Yards and Bird House Plaza to enlarge and redevelop them for animal health, exhibition, and education purposes. These exhibits will be ready by the summer of 1976. Also \$2,500,000 has been appropriated for construction of an education and administration building. Photographs of the Monkey House, Elephant Yards, and Lion-Tiger facility projects are on page D-4.

What Work Needs to be Done?

Only a small number of the important projects have been accomplished or are currently underway. The Master Plan, approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973, for the renovation and improvement program, has 41 major projects clustered into 14 groups for planning, budgeting, and management purposes. Page D-5 shows the Master Plan schedule for these projects, budget estimates, and estimated completion dates.

With funds available from a prior reprogrammed appropriation and new funds appropriated in fiscal years 1973, 1974, and 1975, six of the projects are or can be completed



Monkey House/Old cramped & barred cages



New well-spaced enclosures



New Elephant Yards/Three times more space for the animals



Replacement of 19th century Lion-Tiger facility

NATIONAL ZOOLOGICAL PARK MASTER PLAN SCHEDULE

PROJECT GROUP	PROJECT NUMBER PROJECT	ESTIMATE (1976 VALUE)	PLANS & SPECS.	CONSTR.	ESTIMATED COMPLETION DATE
1	1 Monkey House				12/74
	2 Puma House	Authorized pr	ior to FY 197	3	12/74
I 1	3 Panda House 4 Lion & Tiger Exhibit	\$3,275,000	FY 73	EV 74	Complete
IlI	4 Lion & Tiger Exhibit 5 Elephant Yards	1,450,000	FY 74	FY 74 FY 75	7/76 9/75
111	6 Bird House Plaza	1,680,000	FY 74	FY 75	9/75
IV	7 General Svc-Parking	21,000,000	FY 74,75	FY 76,77	4/78
V	8 Education-Visitor Center	2,500,000	FY 75	FY 75	8/77
VI	Lower Rock Creek Valley	6,450,000	FY 74,75	FY 76,77	7/78
	9 Bears				.,
	10 Sheep & Goats				
	11 Baboons				
	14 Roadway & Utilities 20 Polar Bears				
VlI	Beaver Valley	10,000,000	FY 75, 76	FY 77	12/70
V 1 1	15 Beavers	10,000,000	ri /5, /0	r I //	12/78
	16 Wolves				
	17 Seals & Sea Lions				
	18 N. American Otters				
VIII	Central Area Complex	14,000,000	FY 75,77	FY 77,78	7/79
	21 Small Mammal House Ren.				
	22 Crocodiles & Komodo Dragon				
	23 New Monkey House				
IX	24 Monkey Island Waterfowl Pond Complex	$12,000,000 \sqrt{1}$	EV 75 70	EV 70	1/00
1 \(\)	26 Waterfowl Pond Remodeling	12,000,000	FY 75,78	FY 79	1/80
	27 Lesser & Medium Cats				
	28 Plains Animals				
χ	Building Renovation	4,500,000	FY 79	FY 80	7/80
	29 Reptile House				
	30 Elephant House				
ΧI	Connecticut Avenue Complex	8,000,000	FY 79	FY 80	7/81
	31 Restaurant & Cafeteria				
XII	32 Entrance-N. Amer Animals Aquatic Habitats Complex	9,500,000	FY 80	FY 81	7/02
VII	12 Aquatic Habitats	2,500,000	FI 0U	FI 01	7/82
	15 Penguins				
	33 Manatee				
	34 Kiwi				
	35 Sea Otters				
	36 Platypus				
	37 Hawks & Owls	7 500 000/1			
XIII	Holt House Area	3,500,000/1	FY 81	FY 82	1/83
	38 Holt House Ren. & Greenhse 39 Research-Holding Nursery				
XIV	North Road Area	15,000,000 / 1/2	FV 82	FY 83	7/84
1	40 Klingle Street Bridge	,,	11 02	F1 65	7/04
	41 Large Plains Animals				
	Total Cost \$1	112,855,000/3			

Estimates include plans and specifications, all utilities, walks and roads in Master Plan area, landscaping, graphics, exhibits, construction contingencies and escalation to July 1976.

Projects may be reduced approximately \$10,000,000 by alternative development at the Front Royal Conservation Center.

This project includes animal exhibits above future underground parking structures.

This amount represents the \$99,180,000 Master Plan program described in the FY 1975 justifications, updated by escalation of costs to FY 1976.

(Monkey House, Panda House, Lion and Tiger Exhibit, Elephant Yards, Bird House Plaza, and Education-Visitor Center). Planning can be completed and first phase construction accomplished on the General Service and Parking Facility. And planning can be advanced on Lower Rock Creek Valley, Beaver Valley, and Central Area group projects.

As shown by the schedule, however, planning and construction remain to be completed on new bear exhibits (polar bears included); renovation of present bear dens; complete remodeling of sea lion exhibits for seals, sea lions, beavers, and otters; renovation and remodeling of small mammals house (including gorillas and orangutans); renovation and modernization of the Reptile House with special exhibit of the Komodo Dragon and crocodile; modernization of the waterfowl complex; monkey island; small and medium cats (bobcats to leopards); renovation and modernization of Elephant House and tropical aquatic habitat building for such as penguins, manatees, various aquatic mammals, and fish.

Why is the FY 1976 Plan of Work Particularly Important?

First and foremost, it is important to keep the long-sought momentum in order to complete the jobs as quickly as possible for program reasons, to save future year construction cost escalation, and to conclude the necessary interference with visitors' education and enjoyment caused by construction detours and activity.

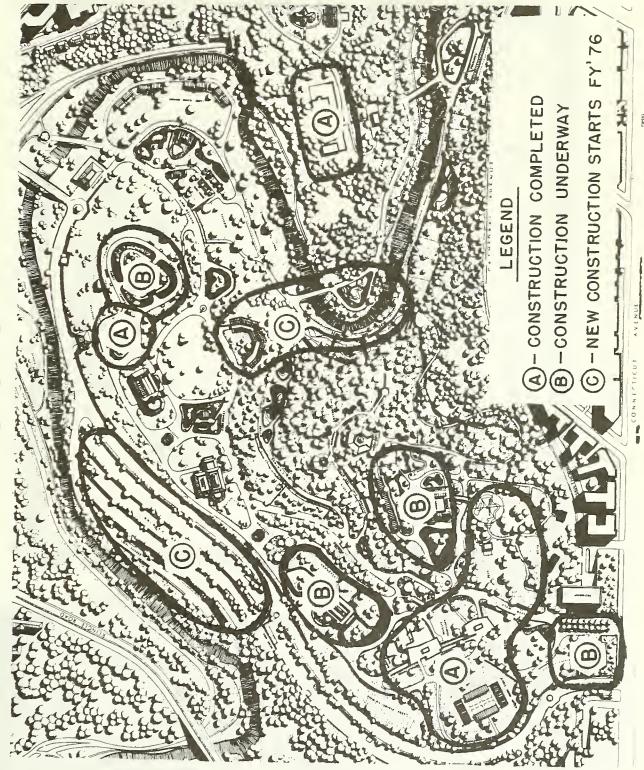
Past and present planning has recognized the impact that the Bicentennial celebration visitor load will have on the Zoo. Consequently, a construction and renovation schedule has been adopted that will result in the center of the Zoo being presentable to receive visitors with some new attractions such as the large cat exhibit now under construction. New construction during this period will be on the perimeter of the Zoo, such as the General Service and Parking Facility and the Lower Rock Creek Valley complex as shown on page D-7.

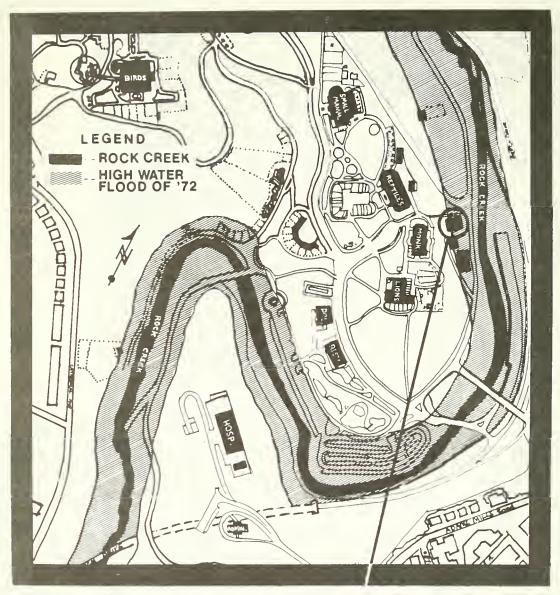
Details on FY 1976 projects are provided in the following sections.

General Service and Parking Facilities (\$4,550,000). These facilities are pivotal to the entire Master Plan construction program. They will provide improved access and accommodation for visitor parking, contain approximately 900 parking spaces for a total of 1730 (the Zoo now has 1030 spaces), and, equally important, centrally house and organize all service and support functions of the Zoo. These are craft and trade shops and offices, gardening shops, animal commissary, motor pool, supply offices and stockrooms, and protective services. Space vacated elsewhere in the Zoo by these activities and certain current parking areas (some 12 acres) will become available for animal and public service development projects that are keys to the success of the Master Plan. Some of these projects are new monkey exhibits, exhibits for small and medium sized cats, and exhibits for large plains animals.

These facilities will be located along Rock Creek adjacent to the roadway which now connects the Connecticut Avenue and Harvard Street entrances to the Zoo. The architect's design adapts the structure to the hillside and blends the floor levels to a slope thereby minimizing the visual impact from Rock Creek Drive. Landscaped terraces and planter boxes will reduce further any intrusion of this structure on the natural character of the area.

Total cost of these facilities is estimated at \$21,000,000 of which \$300,000 was appropriated in FY 1974 for first phase planning and \$2,700,000 in FY 1975. The FY 1975 appropriation will permit final plans and specifications to be completed and ready for bidding by July 1975. The FY 1976 request of \$4,550,000 will permit construction completion of an initial self-contained increment of the facility, consisting of the lower level service building with roof-top parking for 298 cars. This will be a fully usable facility designed so that the additional parking decks above can be constructed at a later date. An appropriation of \$13,450,000 will be requested in FY 1977 to complete the total parking structure in order to free up valuable in-park space for Master Plan exhibits.





Present facilities under increasing flood threat

New facilities will correct flood threat



The service facility solves tough problems that plague more than a dozen support services stuffed in old basements, attics, and temporary sheds. Most critical among these are the maintenance shops and commissary. Nearly all the workshops are now on a site suffering increasing flood damages and risk. The \$125,000 damages caused by Hurricane Agnes may not be repeated soon, argue the statisticians. But the fact is that since Agnes, three flash floods have washed up to the shops' level and these events are becoming more frequent as more of the watershed is paved over. See page D-8 for the effects of floods.

The commissary is in an impossible pinch. More efficient animal food service is being demanded from an increasingly antiquated facility. The freezers and coolers were written off by a commercial donor before received a decade ago. Cramped space, low basement ceilings deny any chance for solution in the current site. The new General Service facility is needed now to solve these and many other problems.

Lower Rock Creek Valley (\$3,000,000). The FY 1974 and 1975 appropriations provided a total of \$500,000 to prepare construction plans and specifications for Master Plan Group VI projects designated for the Lower Rock Creek area. By July 1975, the Zoo will be ready to obtain construction bids for a portion of the Group's projects consisting of new polar and grizzly bear exhibits and complete renovation (rather than new construction to reduce costs) of existing bear dens for sun, sloth, and spectacle bears and for the Smokey exhibit. All bears will be exhibited with increased space for their well being and with minimum visual obstruction to the visitors by use of moats and other techniques. The reconstruction of the bear dens is an essential safety and health requirement. Present facilities were constructed in 1902 and are badly deteriorated. The existing cement pools have major cracks through which hundreds of gallons of water are lost daily. Bars have rusted so badly that in many places there is insufficient metal to which replacement bars can be welded.

The major new exhibit to be constructed with funds requested in FY 1976 is the Polar Bear exhibit which will have three viewing areas with water moats and simulated ice floe areas. Two viewing areas will be used for females and cubs. A feature of the facility will be the cubbing dens carefully designed for breeding purposes. Breeding the endangered polar bear in captive conditions can be accomplished by overcoming technical difficulties.

A future appropriation will be requested to complete projects in the lower Rock Creek Group which include exhibits of goats, sheep, and baboons with excellent hillside viewing and with associated audio-visual exhibits.

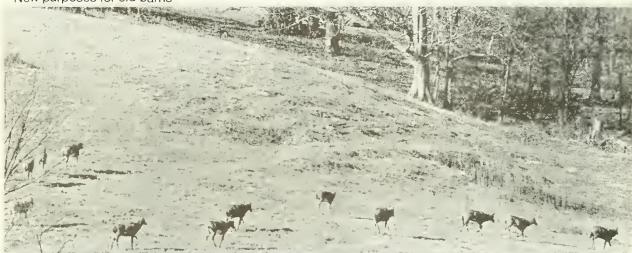
Beaver Valley (\$490,000). Advance planning for the several projects in Beaver Valley (Master Plan Group VII) has been started with \$80,000 appropriated in FY 1975. The projects in this group include a beaver exhibit (illuminating this animal's extraordinary role as a natural force in the development of our country), constructed to show the beaver in action in the water, dam building, and in his lodge; a very active exhibit of the North American otter; a major exhibit pool for seals and sea lions; and a new enclosure permitting people to discover the beauty and character of the wolves.

The requested FY 1976 appropriation of \$490,000 will allow completion of the total plans and specifications in advance of a construction appropriation to be requested in FY 1977.

Design and Installation of Graphics (\$100,000). Present signage at the Zoo is a patchquilt of improvisations strung together through this century. The Zoo must do a better job in guiding and serving the visitor, thus a graphic design consultant has been retained to work with the Master Plan architect and with the exhibits and education



New purposes for old barns



Pere David's Deer/Extinct in wild/Free safe and breeding at Front Royal



Building enclosure fencing

offices to upgrade and standardize graphics and street furniture and to identify and coordinate graphic needs for new facilities. This will result in approved standards for exhibits, street signs, building signs, benches, trash containers, light posts, and telephone booths. As new facilities are completed, the approved graphics and street furniture designs should be implemented. In order to prepare for Bicentennial visitors to the new exhibits, an appropriation of \$100,000 is required for the environs of the lion and tiger exhibit, elephant and bird house yards, and other connecting areas and pathways.

Front Royal, Virginia, Conservation Center Renovation and Improvements (\$760,000). An appropriation of \$760,000 is sought to make repairs, modifications, and improvements to the National Zoological Park's Animal Conservation Center. This 3,000 acre site, the former Beef Cattle Experiment Station at Front Royal, Virginia, was declared excess by the U.S. Department of Agriculture in November, 1973. A temporary use permit was granted by the General Services Administration to the Smithsonian in January,1974. Formal transfer of the property to the Institution is being processed.

Such a site has long been sought by the Zoo to use for breeding endangered wildlife species and for associated conservation and research efforts. Breeding groups will be assembled in cooperation with other zoos whose city sites preclude the space needed for successful breeding groups of exotic animals. Other important uses include holding animals temporarily displaced by the Master Plan construction at the Zoo (as well as animals obtained in anticipation of construction completion) and farming land to produce an ample supply of silenium-rich hay needed for animal health which must now be purchased from the Midwest. Photographs of the Front Royal site are on page D-10.

Funds are required to continue the installation of containment fencing and cages. Existing buildings will be modified to provide space for animal housing, commissary facilities, administration, research, and housing for personnel. The water, sewage, and electrical systems must be renovated to ensure continued dependable service. Master planning for the future use of the Conservation Center will be undertaken, including study of cost saving alternatives to the development of the Rock Creek Zoo, particularly with reference to research and breeding programs.

Renovation and Repairs (\$650,000). An amount of \$650,000 is required to continue the program of renovation, repairs, and preventive maintenance of existing facilities. This funding is required to keep the heavily used Zoo in safe condition for the visiting public, for the upkeep and improvement of animal enclosures and staff facilities, and to maintain new buildings in good condition so that in the future the Zoo will not be faced with an overwhelming backlog of repairs. Renovation and repair projects include: painting; roof patching and replacement; electrical repairs and improvements; repairs and extensions to water, steam, and other utilities; and fence, road, curb and sidewalk repairs and improvements for safety.

Construction and improvement work is accomplished primarily by contract. There are occasional projects, however, not lending themselves to contract. For example, suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment and the use of in-house or temporary labor, is the most cost-effective solution.

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

FY 1976 Estimate and July 1 - Sept. 30, 1976 Period

	Project	FY 1976 Estimate	July 1 - Sept. 30, 1976 Estimate
1.	General Service and Parking Facilities	\$4,550,000	-
2.	Lower Rock Creek Valley	3,000,000	-
3.	Beaver Valley	490,000	-
4.	Graphics	100,000	-
5.	Central Area Complex	-	\$900,000
6.	Renovation and Repair	650,000	160,000
7.	Front Royal, Virginia, Conservation Center Renovation	760,000	380,000
	Totals	\$9,550,000	\$1,440,000

SMITHSONIAN INSTITUTION

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

For necessary expenses of planning, construction, remodeling, and equipping of buildings and facilities at the National Zoological Park, \$9,550,000 \$9,550,000

For "Construction and Improvements, National Zoological Park" for the period July 1, 1976, through September 30, 1976, \$1,440,000.

(20 U.S.C. 41 et seq.; Department of the Interior and Related Agencies Appropriation Act, 1975.)

SMITHSONIAN INSTITUTION CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

Identification code 32-50-0129-0-1-503	19 actual	19 estimate	19 estimate
	July 1 - Sept. 30, 1976		
Program by activities:			
Planning, Design, and Construction (program costs, funded)	1,998	- - -	
Change in selected resources (undelivered orders)	558		
O Total obligations	1,440		
inancing:			
Budget authority (appropriation) elation of obligations to outlays: 1 Obligations incurred, net	1,440 12,113 - 7,953 5,600		

Justification for Transition Period

Work must be undertaken during the summer of 1976 in order to be ready to meet FY 1977 scheduled objectives for completion of Master Plan improvements to the National Zoological Park; to prepare for animal relocations before the advent of cold weather; and to accomplish non-deferrable repairs and renovations. The transition period appropriation will be applied as follows:

Central Area Complex	\$900,000
Renovation and Repair	160,000
Front Royal, Virginia, Conservation and Research Center	380,000
Total	\$1,440,000

<u>Central Area Complex</u> \$900,000

With funds appropriated in FY 1975, schematic studies were started for projects incorporated in the approved Master Plan for the central area of the Zoological Park. These projects include complete renovation of the existing Small Mammal House, constructed in 1937, to provide new and improved space for great apes as well as a variety of small mammals; new central yard exhibits; new facilities for monkeys including an outdoor island exhibit; as well as graphics, landscaping, utilities, sidewalks, and site improvements. Funds will distribute evenly for purposes of maintaining planning progress to gain readiness for earliest possible FY 1977 construction, and for necessary preparations for continuity of visitor and animal programs during construction. Since the area includes the Zoo's central pedestrian arteries, alternative walkways must be achieved before new construction. Utilities must be relocated in some instances. Animals must be relocated from the site of first phase construction. To be ready to maintain Master Plan progress in FY 1977, this work must be accomplished in the summer of 1976.

This amount is a quarterly increment of an annual request for funds to maintain existing deteriorating facilities and exhibits in advance of complete rebuilding under the Master Plan program; and to perform essential major repairs to used walkways, facilities, and mechanical services. Because the Zoo is an open park there are many renovation and repairs tasks that may not be deferred until fall.

Front Royal, Virginia, Conservation Center Renovation......\$380,000

The amount requested, 50 percent of the FY 1976 estimate, is for improvements to the Conservation Center that are essential for housing and care of scheduled animal arrivals. A number of tasks must be accomplished during the summer season for completion prior to late fall. Beyond that time animal transfers, in most cases, must be deferred until after severe winter weather has passed. This, in effect, would mean a lost breeding season should these improvement tasks not be undertaken in July and August. It is also necessary that improvements be accomplished on schedule to permit certain animal relocations in preparation for Master Plan construction steps in the Zoological Park.

RESTORATION AND RENOVATION OF BUILDINGS

1974 Appropriation.....\$1,070,000 1975 Appropriation.....\$1,490,000 1976 Estimate......\$1,467,000

This account is used to fund major repairs, alterations, and improvements of a long-term nature and benefit. From time to time, it is used also for construction of major additions to existing facilities or for minor new temporary or permanent buildings or other facilities. Facilities planning and studies and other related expenses may be funded from this account. Projects undertaken are in support of research, care, and protection of collections; public accommodation and safety; and maintenance and development of a valuable physical plant and natural areas. Work is accomplished primarily by contract. There are occasional projects not lending themselves to contract. For example, suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment and the use of in-house or temporary labor, is the most cost-effective solution.

With funds now available, the Institution is carrying out several significant projects, most notably the air-conditioning and phased interior and exterior renovation and restoration of the Arts and Industries Building for special Bicentennial exhibition purposes. Continuation funding for certain of these projects and funding for other repair and major maintenance work are sought in the FY 1976 appropriation.

An amount of \$1,467,000, a reduction from the FY 1975 level, is required for these projects.

1.	Mt. Hopkins, Arizona, Observatory road improvements and telescope annex facility	\$	200,000	
2.	History and Technology Building and Natural History Building fire control systems		150,000	
3.	Tropical Research Institute laboratory improvements		75,000	
4.	Arts and Industries Building renovation		250,000	
5.	South Yard improvements		200,000	
6.	History and Technology Building library addition planning		125,000	
7.	General building and facility repairs and improvements		467,000	
		\$1	,467,000	

Details on these projects appear in the following justifications.

1. Mt. Hopkins, Arizona, Observatory Road Improvements and Telescope Annex Facility (\$200,000)

For several years the Smithsonian Astrophysical Observatory (SAO) has been following a phased plan of repairs and improvements at its Mt. Hopkins Observatory near Tucson, Arizona.

Construction of a commercial power line by the Citizens Utilities Co. from the Amado area in the valley to the ridge area distribution point along with the installation

of switchgear for standby generators is planned to be completed in FY 1975. Extension of the distribution system to the summit bowl area is planned for completion in FY 1976. No additional funds are required for this project in FY 1976. Engineering source survey and design of a water supply system is planned for completion in FY 1976. Holding tanks at the summit and ridge sites were installed in FY 1975. Construction of the water system is planned for FY 1977. No additional funds are requested for this project in FY 1976.

Repairs and improvements to some of the more dangerous sections of the Mt. Hopkins access road will be completed in FY 1975. Because of the heavy hauling necessitated by the installation of the MMT at the summit site, the paving of the improved sections of the ridge area and summit access roads will be deferred until FY 1977. The Mt. Hopkins road improvement plan, prepared by consulting engineers, calls for the rerouting of the existing section of the access road through Montosa Canyon as the next phase of the project for safety and economic reasons. This section of steep (12 percent to 18 percent grades), narrow roadway is the most dangerous portion of the access road. It severely restricts the type of vehicles that may safely traverse it, as well as the hauling capacity of trucks delivering materials and equipment to the Observatory. It is estimated that significant savings in hauling bulk material for future paving operations will result from the construction of this new 7 percent grade road to bypass the existing treacherous route. An amount of \$125,000 is requested for this project for FY 1976. The plan calls for continued improvements to the sections below the Montosa Canyon in FY 1977 and future years.

A 24-inch telescope and its dome, given to SAO by the State University of New York at Stony Brook, Long Island, has been installed near the existing 60-inch telescope facility. Work and storage space are needed at both instruments if they are to be used effectively. An amount of \$75,000 is required to design and construct laboratory, darkroom, and storage space.

2. <u>History and Technology Building and Natural History Building Fire Control Systems</u> (\$150,000)

Studies by safety and fire protection experts have shown that much work needs to be done in the History and Technology and Natural History Buildings to improve fire safety. Fire detection and sprinkler protection is presently lacking in most public areas and should be installed as changes take place in exhibit and other public areas. Similar safeguards are needed in areas where museum collections are housed and where research work takes place. Other fire protection needs include the addition of booster pumps in order to give adequate water pressure and the installation of fire doors and drains. Funding of \$150,000 is sought to continue this long-term phased program.

3. Tropical Research Institute Laboratory Improvements (\$75,000)

The Smithsonian Tropical Research Institute, centered in Panama, is engaged in basic biological research especially concerning questions of ecology and evolution in the tropics. Its present facilities are inadequate. The Tivoli Hotel site (in the Canal Zone but adjacent to the Republic of Panama) has been made available to the Institute. It offers several important advantages as the headquarters site to include offices and laboratories for administrative staff and scientists and spaces for visiting researchers and students. The site has a sturdy masonry structure, previously used as a kitchen building, which was deemed suitable for renovation to meet some of these needs.

Work that has been completed or is underway includes roofing, new electrical and mechanical distribution systems, and air-conditioning, plumbing, and a new entrance. The plan of work for FY 1976 to complete this project calls for the partitioning of interior work spaces, finishing floors, installing lighting, and painting. An appropriation of \$75,000 is requested.

4. Arts and Industries Building Renovation (\$250,000)

Estimates in the early 1970's of the cost of the renovation and restoration of the historic 1879 Arts and Industries Building amounted to about \$5,000,000. The FY 1973 appropriation provided \$3,355,000 for the major portion of the required work and for recreating the original appearance of the rotunda and four main exhibition halls.

Major improvements include installing heating, ventilation, and air-conditioning systems; replacing obsolete and inadequate electrical and utilities systems; providing additional public and staff restrooms; and related demolition and restoration incidental to the accomplishment of the project's objectives. This initial work was started in February 1974 and is expected to be completed in February 1976. Prior to this completion, exhibits installation will begin for a major presentation, 1876 - A Centennial Exhibition, funded as part of the Institution's Bicentennial program.

Based on current costs, about \$2,300,000 of additional work remains to be done to produce a completely restored and renovated facility. This additional work is important to the long-term proper functioning of the building and to protect the structure from weather damage. Major additional jobs to be done include new roofing and insulation (a survey is now underway to determine the extent of the requirement); the repair, replacement, and painting of windows, including double glazing where necessary to maintain proper temperature and humidity conditions and save on utility costs; the installation of an elevator, especially to aid handicapped persons; installation, repair, and painting of arched ceilings; and the preparation of interior spaces for staff and visitor uses. An amount of \$300,000 was appropriated in FY 1975 towards these needs. The FY 1976 budget request for \$250,000 will sustain renovation progress with the balance of the required funding to be sought in future years.

5. South Yard Improvements (\$200,000)

Funds are required to continue immediate improvements and plan for long-term development of the South Yard, the area bounded by the original Smithsonian Building, the Arts and Industries Building, the Freer Gallery of Art, and Independence Avenue. The immediate goal is to remove much of the aggregation of unattractive sheds, structures, and surface facilities and develop an inviting, restful garden area. The longer-range plan is to maintain this environment while developing the site for additional productive uses to include areas for research, education, and other public services.

Funds available in FY 1975 will initiate planning for the development of this site, for demolition and removal of existing structures and facilities, and for preliminary construction phases. The FY 1976 requirement is to complete the Bicentennial preparation including landscaping, plantings, fixtures and furnishings, and to plan for the phased development of the site subsequent to the Bicentennial. An amount of \$200,000 is sought for these purposes.

6. History and Technology Building Library Addition Planning (\$125,000)

The National Museum of History and Technology's collections of approximately 16 million artifacts are unparalleled in any other institution in the world. Of this number approximately half are related to the history of science and technology. This collection and staff are presently supplemented with considerable holdings of archival materials which lack space to be catalogued and used.

Recently, the largest single private library on the history of science and technology in the world has been given to the Museum by Bern Dibner as a research resource. This extraordinary collection contains more than 25,000 rare books, over 300 incunabula (books printed before 1501), and historic manuscripts, prints, letters of scientists, portraits, science medals, instruments, and apparatus. The library is presently housed in a permanent installation and it is offered to the Museum on the basis that suitable accomodation can be provided. A conservative estimate of the present value of this collection is ten million dollars.

The offer of this library provides the Museum with a unique opportunity. It makes it possible to combine under one roof the largest collection of scientific artifacts with the greatest existing staff of subject experts and the finest library resource on the subject, a combination which would serve as a magnet to attract important scholars and students from all over the world.

The planned sixth floor addition will allow the development of an historical research center in which the Museum's present and future library holdings will be centralized for the use of staff and visiting scholars and students as well as members of the public as appropriate. The Museum's programs in museum and conservation training, pre- and postdoctoral fellowships, and visiting scholars in residence will be accommodated on this floor as well as the newly established Dwight D. Eisenhower Center for Historical Research.

Funds are required to complete the final design effort for the research and library facility for which partial funds were appropriated in FY 1973 and 1974.

7. General Building and Facility Repairs and Improvements (\$467,000)

The Smithsonian has major museum buildings (ranging in age from new to well over 100 years old) with a replacement value of several hundred million dollars, many lesser structures used for research, exhibition, collections management, and administrative purposes, and several thousand acres of land devoted to research, conservation, and education. Heavy public use of these facilities, general deterioration because of age and weathering, safety requirements, and the occasional need to make improvements or additions to keep pace with program requirements create a need for regular, annual attention. Anticipated, mostly major needs are budgeted in this account under specific building or project headings. There is strong need, however, for funds for planning, engineering, repair and improvement response to other projects, including those arising during the year, that are beyond the capability of the Institution's maintenance support Examples of such work are: interior reconstructions or other improvements to meet program requirements; installation of new or replacement plumbing, electrical, and mechanical distribution systems, including heating, ventilating, and air-conditioning; roof repairs and replacements; maintenance and repairs to masonry and other building exteriors to prevent leaks or structural damage; and major repairs to elevators and escalators.

RESTORATION AND RENOVATION OF BUILDINGS

FY 1976 Estimate and July 1 - Sept. 30, 1976 Period

	Project	FY 1976 Estimate	July 1 - Sept. 30, 1976 Estimate
1.	Mt. Hopkins, Arizona, Observatory road improve- ments and telescope annex facility	\$200,000	\$50,000
2.	History and Technology Building and Natural History Building fire control systems	150,000	35,000
3.	Tropical Research Institute laboratory improvements	75,000	-
4.	Arts and Industries Building renovation	250,000	50,000
5.	South Yard improvements	200,000	-
6.	History and Technology Building library addition planning	125,000	-
7.	General building and facility repairs and improvements	467,000	265,000
	Totals	\$1,467,000	\$400,000

SMITHSONIAN INSTITUTION

RESTORATION AND RENOVATION OF BUILDINGS

For necessary expenses of restoration and renovation of buildings owned or occupied by the Smithsonian Institution as authorized by section 2 of the Act of August 22, 1949 (63 Stat. 623), including not to exceed \$10.000 for services as authorized by 5 U.S.C. 3109, \$1,490,000 to remain available until expended.

For "Restoration and Renovation of Buildings" for the period July 1, 1976, through September 30, 1976, \$400,000.

(20 U.S.C. 41 et seq.; Department of the Interior and Related Agencies Appropriation Act, 1975.)

Type size: 8 point 22 picas Case 180. Red underscore Case 210 STANDARD FORM 300 July 1964, Bureau of the Budget Circular No. A-11, Revised.

SMITHSONIAN INSTITUTION RESTORATION AND RENOVATION OF BUILDINGS

PROGRAM AND FINANCING - TRANSITION PERIOD (in thousands of dollars)

Identification code 32-50-0132-0-1-503		19 actual	19 estimate	19 estimate
		July 1- Sept. 30, 1976		
rogram by activiti	es:			
Planning, Design, (program costs,	and Construction funded)	434		
Change in selecter (undelivered or	d resources ders)·····	- 34		
O Total obligation	ns	400		
inancing:				
Budget authorit	y(appropriation)	400		
elation of obligat	ions to outlays:			
Obligated balance	erred, net	100		
Outlays				
-22 (Mono e	mst: 21.5)	(Mono cast: δ)	(Mono cast: δ)	(Mono cast: 4,9

Justification for Transition Period

The transition period will be used to sustain progress on certain continuing projects and needs described in the FY 1976 budget, taking advantage of favorable weather conditions for outside projects and scheduling work in such a way to avoid interference with Bicentennial summer visitation. Funds requested will be used for the following projects:

Mt. Hopkins, Arizona, Observatory road improvements	\$50,000
History and Technology and Natural History Buildings fire control systems	35,000
Arts and Industries Building renovation	50,000
General building and facility repairs and improvements	265,000
Total	\$400,000

The requested amount, 25 percent of the FY 1976 budget estimate, will continue the program of correcting safety, drainage, and maintenance problems of the Mt. Hopkins Observatory access road for the protection of staff and visitors and to facilitate operations of the observatory. Portions of the improved road will be paved to eliminate dust problems and to extend the life of the road.

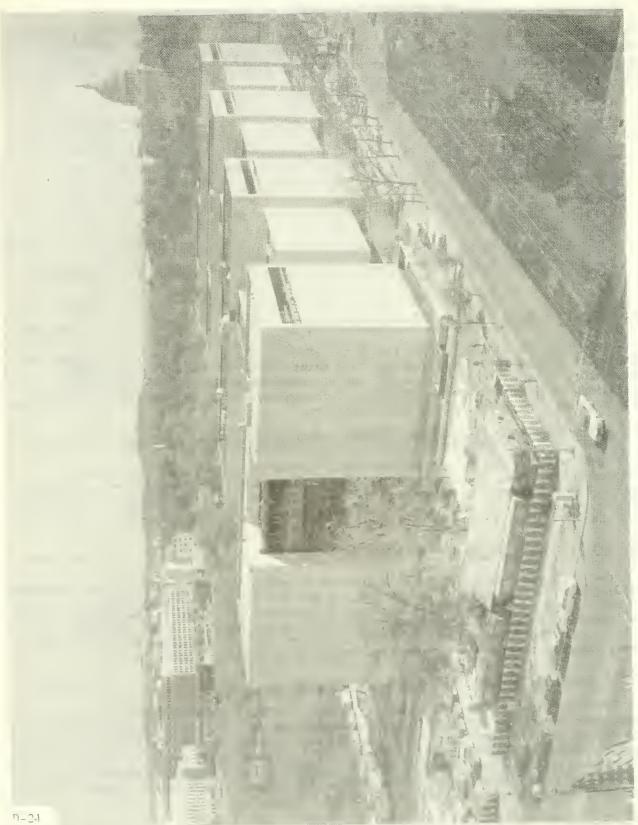
History and Technology and Natural History Buildings fire control systems \$35,000

Funds will be used to sustain the phased effort to improve fire detection and extinguishing systems in public, collection, and work spaces in the History and Technology and Natural History Buildings for the safety and protection of visitors, staff, art, science, and history objects, and the physical plant. This proposed amount is slightly less than 25 percent of the FY 1976 estimate.

The air conditioning and basic renovation of public spaces of the Arts and Industries Building will be accomplished in time for its use for the 1876 - A Centennial Exhibition. Substantial additional work (roof, windows, insulation, etc.) needs to be done to protect the investment in the public areas and to prepare other interior spaces for staff and visitor use. The requested amount is 20 percent of the FY 1976 budget but will maintain steady progress towards the complete renovation of this 1879 structure.

General building and facility repairs and improvements \$265,000

The Institution's physical plant is valued at several hundred million dollars in replacement costs. Substantial funds should be budgeted each year to protect this plant from deterioration by meeting a wide range of major preventive and corrective maintenance. Despite surveys of the buildings and facilities, problems cannot always be detected sufficiently in advance for specific budget identification. Although somewhat more than half of the FY 1976 level, the transition period amount represents a sound investment in needs that are certain to become realities.



New National Air and Space Museum nearing completion for public opening July 4, 1976.

CONSTRUCTION (Liquidation of Contract Authority)

1974	Appropriation\$17,000,000
1975	Appropriation\$ 7,000,000
1976	Estimate\$ 3,000,000

Construction of the National Air and Space Museum continues at a pace which will ensure the building's completion on schedule--by June 1975--and within the authorized funding. At that time, the installation of exhibits will begin in preparation for the public opening on July 4, 1976.

The construction manager system (under the supervision of the General Services Administration) continues to perform with efficiency and effectiveness. The project has been divided into 22 construction contract packages and two supply contract packages. Five of the construction contracts have been completed. These are: excavation; water main relocation; structural steel; metal decks; and roofing. Four contracts are in the final stages. These are: foundations; window walls; skylights; and masonry. The remaining contracts are on schedule and in various states of completion. These are: marble; mechanical; electrical; elevators and escalators; concrete slabs; painting; fireproofing; kitchen equipment; miscellaneous metal; carpentry; spacearium dome; landscaping; and graphics. The two supply contracts are for carpet, which is now being laid. In addition, contracts are being processed for the purchase and installation of necessary equipment for offices, shops, cafeteria, garage, library, work and research areas, and building control and security functions; protective or decorative treatment of walls, entrances, and approaches; theater and planetarium seating and projection systems; gallery structures and other requisite equipment which will permit full and efficient use of the building, its exhibit galleries and its other facilities.

The liquidation of the final \$3,000,000 of contract authority is requested in FY 1976 consistent with the timely completion of the building for its public opening.



Tab E

APPENDIX



SMITHSONIAN INSTITUTION "Salaries and Expenses"

Report of Appropriation by Objects (In thousands of dollars)

	1974 <u>Actual</u>	1975 Estimate	1976 Estimate	Increase '76 over '75
11 Personnel Compensation	36,294	44,597	48,991	4,394
12 Personnel Benefits	3,075	3,850	4,332	482
21 Travel & Transportation of Persons	620	644 <u>/1</u>	810 /1	166
22 Transportation of Things	295	331	411	80
23 Rent, Communications, and Utilities	4,143	5,499	7,103	1,604
24 Printing and Reproduction	1,022	1,134	1,383	249
25 Other Services	6,164	7,314	8,367	1,053
26 Supplies and Materials	2,715	2,928	3,403	475
31 Equipment	3,453	2,692	2,916	224
32 Lands and Structures	8	507	507	-
41 Grants	1,078	1,190	1,171	-19
42 Insurance, Claims, and Indemnities	1	20	14	6
Total Appropriation	58,868	70,706 <u>/2</u>	79,408 <u>/3</u>	8,702/3

<u>/1</u> Excludes \$21 additional travel authority which is to be allocated for priority purposes to Smithsonian user units.

^{/2} This amount includes \$2,917 for pay and utility costs supplementals.

^{/3} This amount includes \$1,873 for necessary pay and \$637 for other uncontrollable increases.

SMITHSONIAN VISITORS (By fiscal year)

Total4/	7,103,474 8,923,131 10,309,836 10,813,195/13 $\frac{5}{13}$,13,12,58 $\frac{6}{10}$,11,523,897 $\frac{2}{10}$,10,430,730 $\frac{2}{13}$,801,208 13,801,208 15,035,323 15,152,967
Renwick Gallery ³ /	105,186 165,846 175,672
Fine Arts & Portrait Galleries 2/	30,888 166,177 216,523 194,468 246,657 254,005
Museum of History & Technology_/	2,509,774 <u>1/</u> 5,091,776 4,829,112 5,546,102 4,750,023 4,174,071 5,483,555 5,955,128 6,808,526 6,905,339 5,850,227
Freer Gallery of Art	130,746 130,597 183,359 168,625 210,972 222,089 212,920 169,533 179,374 217,305 190,425 230,475 204,858
National Air & Space Building	987,858 1,986,319 2,673,618 1,854,186 1,705,683 1,484,422 1,123,698 1,225,959 1,839,373 1,337,445 1,104,151 1,223,917
Museum of Natural History	2,047,973 2,113,053 2,288,397 2,512,306 3,051,472 2,988,006 3,409,957 3,257,957 2,916,749 3,269,791 3,456,755 3,414,640 3,306,105
Arts and Industries Building	2,912,371 3,471,050 3,534,182 2,457,243 2,028,175 1,746,715 1,638,873 1,344,622 1,493,141 2,557,155 1,985,732 2,306,071 2,285,603 2,040,731
Smithsonian Institution Building	1,024,526 1,222,112 1,630,280 1,311,061 1,065,635 870,010 1,020,312 847,176 247,176 275,259 819,617 807,294 739,651
Fiscal	1961 1962 1963 1964 1965 1966 1967 1970 1971 1973

1/ Museum of History and Technology opened January, 1964.

National Collection of Fine Arts opened May, 1968 and the National Portrait Gallery in October, 1968.

Renwick Gallery opened January, 1972.

An additional 2-3,000,000 visitors to the National Zoological Park annually and 50,000 to the Anacostia Museum are excluded from these totals.

July-August, 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.

5/ July-August, 1964, certain Smithsonian Institution 6/ Building closed for renovation October, 1968.
7/ Reflects the significant decrease in visitors to th

Reflects the significant decrease in visitors to the Nation's Capital in the first six months of CY 1968 due to unsettled local conditions.

During CY 1969, a total of 12,438,909 visitors came to the Smithsonian, an increase of 25 percent over CY 1968. Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.

FINANCIAL REPORT

T. AMES WHEELER, TREASURER

FY 1974

CONTINUED SOUND PROGRESS was shown in Smithsonian finances in fiscal year 1974. Thanks to increased federal support and further improvement in results of the Institution's own educational and revenue-generating efforts, we were able to cope satisfactorily with the large inflation-bred rise in costs of salaries, supplies, and services, and, at the same time, to strengthen our current operating funds position.

Added federal appropriations enabled us to increase needed museum protection and other support services and to step up preparations for our important 1976 Bicentennial commitments. These included steady progress on construction and future exhibits for the new National Air and Space Museum and a beginning on a major long-term reconstruction of National Zoological Park facilities. An additional \$1-million gift from the donor of the collections permitted completion of the construction of the Hirshhorn Museum and Sculpture Garden. Other gifts and grants for specific purposes funded a wide variety of research and exhibit activities.

There remains an urgent need for major outside contributions in support of the Cooper-Hewitt Museum of Decorative Arts and Design and a large number of other specific projects. Also, the Institution's endowment funds — always far from adequate for an Institution of this size — experienced during the year a worrisome drop in value. In other respects, however, Smithsonian finances can be said to have improved substantially in fiscal year 1974. Full detail of these results is provided below.

Overall Sources and Application of Financial Support

The total financial support available to the Institution from all sources is shown in Table 1. These figures do not include the finances of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts, and the Woodrow Wilson International Center for Scholars, which are all related legislatively to the Smithsonian but whose financial and administrative affairs are for the most part separately managed under independent Boards of Trustees.

Total funds for operating purposes rose to \$82,681,000 in fiscal year 1974, an increase of \$10,607,000 over the preceding year. Federal appropriations of \$65,063,000 accounted for 78.7 percent of the total, research grants and contracts 12.1 percent, and nonfederal income 9.2 percent; this ratio of support was roughly the same in fiscal year 1973. In addition, Congress provided \$21,860,000 in construction funds for continuing work on the National Air and Space Museum, for repairs to other Smithsonian buildings, and for the National Zoological Park, principally for "Lion Hill," a major beginning on the long-term renovation plan of Zoo facilities.

In Table 2, these revenues from all sources (excluding construction funds and the Special Foreign Currency Program) and their application to individual Smithsonian bureaus and activities are shown in considerable detail, demonstrating the complexity of funding resulting from the variety of resources and the large number of diversified services provided.

FEDERAL OPERATING FUNDS

Federal appropriations for operating purposes totaled \$65,063,000 including \$1,695,000 for the Smithsonian Science Information Exchange, a separately incorporated organization, and \$4,500,000 for the Special Foreign Currency Program (in the blocked currency of certain foreign countries). The Special Foreign Currency Program administers grants to United States universities and similar organizations for research studies in Egypt, India, Pakistan, Poland, Tunisia, and Yugoslavia (see Table 3). This program included a special \$1,000,000 amount (to be renewed for three additional years) to allow United States participation in UNESCO's international campaign to preserve archeological monuments on the Island of Philae in Egypt.

Table 1. Overall Sources of Financial Support [In \$1,000's]

		FY 1972	FY 1973	FY 1974
OPERATING FUNDS				
ederal appropriation: Salaries and expenses Smithsonian Science Information	\$36,895	\$44,701	\$51,633	\$58,868
Exchange	*	1,600	1,600	1,695
Program	2,500	3,500	3,500	4,500
Subtotal	\$39,395	\$49,801	\$56,733	\$65,063
esearch grants and contracts	9,312*	8,088	8,996	9,996
Ionfederal funds:				
Gifts (excluding gifts to endowmen Restricted purpose	ts) 1,880	1,598	2,901	1,970
Unrestricted purpose	304**	26**	33**	275 [*]
Income from endowment and current funds investment	501			2,0
Restricted purpose	1,372	1,573	1,736***	1,750
Unrestricted purpose	330	334	436	747
Revenue producing activities (net)	(534)	(141)	170	1,770
Miscellaneous	406	482	1,069	1,110
Total nonfederal funds	3,758	3,872	6,345***	7,622
Total Operating Support	\$52,465	\$61,761	\$72,074	\$82,681
ONSTRUCTION FUNDS				
ederal Construction Funds:				
National Zoological Park	\$ 200	\$ 200	\$ 675	\$ 3,790
National Air & Space Museum	-0-	1,900	13,000	17,000
Hirshhorn Museum	5,200	3,697	-0-	-0-
Restoration & Renovation of Bldgs.	1,725	550	5,014	1,070
Total Federal Construction Funds	\$ 7,125	\$ 6,347	\$18,689	\$21,860
rivate Plant & Land Acquisition Fun	nds:			
Copper-Hewitt Museum	\$	\$ 700	\$ 106	\$ 262
Hirshhorn Museum		_	_	1,000
Chesapeake Bay Center	25	386	149	70
Total Private Plant and Land				
Acquisition Funds	\$ 25	\$ 1,086	\$ 255	\$ 1,332

^{*} Smithsonian Science Information Exchange, Inc., funded by National Science Foundation contract in fiscal year 1971 (\$1,400,000) and thereafter by direct federal appropriation.

^{**} Excluding gifts to Associates (included under Revenue Producing Activities).

^{***} Includes \$225,000 of fiscal year 1973 income transferred from Endowment Fund No. 3 for this purpose in fiscal year 1972.

Table 2.—Source and Application of Operating Funds for Year Ended June 30, 1974

(Excludes Special Foreign Currency Funds, Plant Funds, and Enodwments)
[In \$1,000's]

			N	onfedera	l func	ls	
			Un	irestricte	d	Rest	ricted
Funds	Fed- eral funds	Total non- fed- eral funds	Gen- eral	pro- duc-	Spe- cial pur- pose	Gen- eral	Grants and con- tracts
FUND BALANCES — 1 July 1973	\$ 0	\$ 5,120	\$2,292	\$ 0	\$201	\$2,546	\$ 81
FUNDS PROVIDED							
Federal Appropriations Investment Income Grants and Contracts Gifts Sales and Revenue Other	\$60,563	\$ 2,497 9,968 2,505 12,615 970	\$ 744 - 151 - 284	\$ - 260 12,473 2	\$ 3 - 124 142 138	\$1,750 - 1,970 - 546	\$ - 9,968 - - -
Total Provided	\$60,563	\$28,555	\$1,179	\$12,735	\$407	\$4,266	\$ 9,968
Total Available	\$60,563	\$33,675	\$3,471	\$12,735	\$608	\$6,812	\$10,049
FUNDS APPLIED Science:							
Environmental Science Natl. Museum of Nat.	\$ 1,316	\$ 1,158	\$ 14	\$ -	\$ 5	\$ 107	\$ 1,032
Hist.	8,040	1,055	41	***	43	161	810
Natl. Zoological Park Fort Pierce Bureau	4,565 —	46 1,032	19 24	_	_	21 1,008	
Science Info. Exchange Smithsonian Astroph.	1,695	-	_	-	-		****
Observatory	3,207	5,844	18	_	7	210	5,609
Radiation Biology Lab Smithsonian Tropical	1,294	95	~	-	_	9	86
Research Inst Interdisciplinary Communi-	1,002	70	1	-	47	4	18
cations Program Natl. Air and Space	-	894	22	_	1	30	841
Museum	2,633	108	3	_	59	24	22
Other Science	1,132	1,041	118		1	114	808
Total	24,884	11,343	260	-	163	1,688	9,232
History and Art: Natl. Portrait Gallery Natl. Collection of	1,122	62	22	- Parecia	25	1	14
Fine Arts	1,653	79	8	_	34	35	2
Freer Gallery of Art Natl. Museum of History	274	1,134	-	-	_	1,134	-
and Technology	4,334	398	46	_	11	222	119

Table 2. Source and Application of Operating Funds for Year Ended June 30, 1974—continued
[In \$1,000's]

			Ν	Ionfedera	l fund	ls	
				Unrestric	ted	Res	tricted
Funds	Fed- eral funds	eral	Gei		cia	l - Gen-	Grants and con- tracts
Cooper-Hewitt Museum Archives of American	174	266	4	_	-	237	25
Art	238	203	-	_	-	203	-
American Revolution	1,746	_	-	_	-	_	_
Hillwood	_	210	_	. –	_	210	_
Hirshhorn Museum	1,326	82	82	_	_	-	_
Other History and Art	1,263	63	5	_		19	39
Total	12,130	2,497	167	_	70	2,061	199
Public Service: Revenue Producing Activities Smithsonian Press	900	200		200			
Performing Arts	800 422	1,083	_	493	_	107	483
Other	422	10,342	_	10,272	_	9	61
Anacostia Museum Reading Is Fundamental,	317	21	18	-	_	3	-
Inc	_	533		-	_	533	-
Other Public Service	1,157	83	72	-	-	5	6
Total	2,696	12,262	90	10,965	_	657	550
Museum Programs:							
Libraries	1,165	2	_	_	-	2	_
Exhibits	1,063	26	••	_	13	2	11
Programs	684	_	_	-	_	_	_
Other Museum Programs	1,409	87	45		6	36	
Total	4,321	115	45	-	19	40	11
Buildings Management and Protection Services	11,839	9	9				
Administration	4,693	3,386	443	461	13	331	2,138
Overhead Recovered Transfers for Designated	-	(3,345)		(461)			(2,138)
Purposes	_	1,026	(208)	1,770	(104)	(436)	4
Total Funds Applied	\$60,563	\$27,293	\$ 404	\$12,735	\$148	\$4,010	\$9,996
FUND BALANCES — 30 June 1974	0	\$ 6,382	\$3,067	\$ 0	\$460	\$2,802	\$ 53

Table 3. Special Foreign Currency Program, Fiscal Year 1974 Obligations

[In \$1,000's]

	System- atic &	Astro-			
	Environ- p	physics &		Grant	
	mental	Earth	Museum	Adminis-	-
Archeology	Biology	Sciences	Programs	tration	Total
\$ 125,470	\$ 112,650	\$31,369	\$ 8,679	\$48,081	\$ 326,249
92,661	223,383	_	950	-	316,994
311,750	68,726	38,645	8,576	670	428,367
96,661	544,107	16,250	40,343	5,668	703,029
1,619,172	115,046	401	34,370	_	1,768,989
85,908	400,905				486,813
\$2,331,622	\$1,464,817	\$86,665	\$92,918	\$54,419	\$4,030,441
	\$ 125,470 92,661 311,750 96,661 1,619,172 85,908	atic & Environ- mental Biology \$ 125,470 \$ 112,650 92,661 223,383 311,750 68,726 96,661 544,107 1,619,172 115,046 85,908 400,905	atic & Astro-Environ- physics & mental Earth Archeology Biology Sciences \$ 125,470 \$ 112,650 \$31,369 92,661 223,383 - 311,750 68,726 38,645 96,661 544,107 16,250 1,619,172 115,046 401 85,908 400,905 -	atic & Astro-Environ-physics & mental Earth Museum Archeology Biology Sciences Programs \$ 125,470 \$ 112,650 \$31,369 \$ 8,679 92,661 223,383 — 950 311,750 68,726 38,645 8,576 96,661 544,107 16,250 40,343 1,619,172 115,046 401 34,370 85,908 400,905 — —	atic & Astro-Environ-physics & Grant Environ-physics & mental Earth Earth Museum Administration Archeology Biology Sciences Programs tration \$ 125,470 \$ 112,650 \$31,369 \$ 8,679 \$48,081 92,661 223,383 - 950 - 311,750 68,726 38,645 8,576 670 96,661 544,107 16,250 40,343 5,668 1,619,172 115,046 401 34,370 - 85,908 400,905 - - - -

Excluding these special-purpose appropriations for the Science Information Exchange and the Foreign Currency Program, federal operating funds amounted to \$58,868,000. This is \$7,235,000 more than fiscal year 1973, but \$4,180,000 (58 percent) of this substantial increase is attributable solely to meeting the costs of federal pay raises of various categories beyond the Institution's control. The balance of the increase, \$3,055,000, went primarily to three highpriority program objectives. These were (1) preparation of exhibits and related work of the National Air and Space Museum scheduled to open in its new building on the Mall on July 4, 1976; (2) development of special Washington, D. C., and national Bicentennial activities; and (3) phased strengthening of supporting services such as museum object conservation; reference and research libraries; automatic data processing applications to research, collections, and administrative activities; and buildings and facilities care and protection. Allocation of the appropriations for operating purposes (excluding the Foreign Currency Program) by broad activity areas over the past several years is shown in Table 4.

It may be of interest to note that in performance terms about \$12.6 million of the fiscal year 1974 appropriation was spent on basic research in art, history, and science; \$4.2 million on the acquisition and management of collections (only a few hundred thousand dollars of this were available for the purchase of objects); \$7.1 million for

Table 4. Application of Federal Appropriations Fiscal Year 1971 through Fiscal Year 1974

(Excluding Special Foreign Currency Program) [In \$1,000's]

Area	FY 1971	FY 1972	FY 1973	FY 1974		
Science	\$13,495	\$18,365*	\$20,329*	\$24,884*		
History and Art	5,878	6,285	8,022	12,130		
Public Service	1,442	2,093	2,253	2,696		
Museum Programs	3,744	5,881	6,660	4,321		
Administration	3,051	3,235	3,987	4,693		
Building Maintenance and						
Protection	9,285	10,442	11,982	11,839		
Total	\$36,895	\$46,301	\$53,233	\$60,563		
	:	-				

^{*} Includes \$1,600,000 (FY 1972 and FY 1973) and \$1,695,000 (FY 1974) for the Smithsonian Science Information Exchange, Inc., which had been funded prior to 1972 by grants from the National Science Foundation.

the design, production, installation, and upkeep of exhibits; and \$2.7 million for various aspects of public and scholarly education and orientation. These program output areas total about \$26.6 million. Support areas total about \$34 million, of which \$13.0 million was for the care of buildings, \$7.8 million was for protection and security, and the balance was for other important administrative and support functions.

FEDERAL CONSTRUCTION FUNDS

Construction funding in fiscal year 1974 amounted to \$4,860,000, plus \$17,000,000 to meet progress payments under the contract authority provided in the fiscal year 1973 Appropriation Act for the construction of the National Air and Space Museum. The new appropriation provided primarily for the construction of the exciting new lion and tiger exhibit at the National Zoological Park and further planning efforts aimed at implementing the approved master plan for the complete renovation of the Zoo. This funding also provided relatively minor amounts for repairs and improvements to other Smithsonian facilities such as safety and access improvements to the Mount Hopkins Observatory road in Arizona.

GRANTS AND CONTRACTS

Grants and contracts from federal agencies once again contributed in a major way to the Institution's research programs, predominantly in scientific disciplines. \$9,996,000 of these funds was expended in fiscal year 1974, up from \$8,996,000 in fiscal year 1973. The major recipient, accounting for over half of the total expenditures, continued to be the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts, with grants from the National Aeronautics and Space Administration for such projects as the monitoring of Comet Kahoutek, meteor studies, and design of hydrogen maser systems. Other projects ranged from ecological studies in South America and Asia to research on American folklore. Table 5 shows the major granting agencies to the Smithsonian over a four-year period, representing several hundred different grants and contracts each year.

PRIVATE TRUST FUNDS

Originally established entirely with funds from Mr. Smithson's bequest, the Institution has, over a long period of years, derived an increasing proportion of its support from federal appropriations as it was entrusted with more national collections and expanded its research and public exhibitions.

It is now an important goal of Smithsonian administration to bolster the Institution's private resources in line with or exceeding the growth of its federal support, in order to restore a better balance between the two, thereby helping to preserve its uniquely flexible and independent character among national establishments. Despite the many serious economic uncertainties of this past 12-month period, fiscal year 1974 results were in line with this goal. Receipts (including those for operating purposes, land acquisition, and building construction) from gifts, investment income, revenue-producing activities, fees, and other revenues all increased to record levels, with the total equaling \$8,954,000 (not including \$105,000 gifts to endowment funds). Of this total \$5,598,000 was designated for specific restricted purposes; this latter amount was fractionally higher than in fiscal year 1973, while income for unrestricted purposes rose from \$1,013,000 to \$3,356,000 (see Table 6).

Table 5. Grants and Contracts
[In \$1,000's]

Federal Agencies	FY 1971	FY 1972	FY 1973	FY 1974	
Atomic Energy Commission	\$ 91	\$ 73	\$ 76	\$ 72	
Department of Commerce	166	392	203	184	
Department of Defense	843	916	969	872	
Department of Health, Education					
and Welfare	409	411	306	261	
Department of Interior	258	247	230	283	
Department of Labor	3	11	51	163	
Department of State	176	195	593	1,066	
National Aeronautics and Space					
Administration	4,930	4,605	4,923	5,308	
National Endowments for the					
Arts and Humanities		35	58	102	
National Science Foundation	2,028*	560	957	690	
Other	408	643	630	995	
Total	\$9,312	\$8,088	\$8,996	\$9,996	

^{*} Includes funding for Smithsonian Science Information Exchange, Inc. of \$1,400,000.

TABLE 6. Total Private Funds Income Fiscal Year 1974
[In \$1,000's]

	Unrest purp	. ,		
Revenue sources	General & revenue producing	Special purpose*	Restricted purposes	Total
For Operating Purposes:				
Investments	\$ 744	\$ 3	\$1,750	\$2,497
Gifts	151**	124	1,970	2,245
Revenue Producing Activities	1,770			1,770
Concessions and miscellaneous	284	280	546	1,110
Total Operating Funds	\$2,949	\$407	\$4,266	\$7,622
For Plant:				
Gifts —				
Hirshhorn Museum	\$ -	\$ -	\$1,000	-\$1,000
Chesapeake Bay Center		-	70	70
Cooper-Hewitt Museum			117	117
Total Gifts	\$ -	\$ -	\$1,187	\$1,187
Miscellaneous —				
Cooper-Hewitt Museum	\$ -	\$ -	145	145
Total Plant	\$ -	\$ -	\$1,332	\$1,332
Grand Total	\$2,949	\$407	\$5,598	\$8,954

Classified as Restricted Funds in previous years; represents unrestricted income designated by management to be used only for specific purposes.

^{**} Excluding \$260,000 gifts to Associates (included under Revenue Producing Activities) and \$105,000 gifts to Endowment Funds.

UNRESTRICTED PRIVATE FUNDS

The substantial increase in unrestricted general purpose private funds in fiscal year 1974 was extremely welcome and enabled the Institution for the first time to reserve private monies for plant improvements not believed to be obtainable from federal appropriations but which will enhance our ability to serve the public and which may, at the same time, lead to increased private support in the years ahead. The build-up of the general unrestricted fund balance to a more adequate level of \$3,067,000 also means that portions of any similar gains in future years may also be used for this purpose or to strengthen our present low endowment reserves.

As may be seen in Table 7, the increase in income before transfers to other funds, equaling \$2,336,000 in fiscal year 1974 compared to \$688,000 in fiscal year 1973, arose in part from a jump in investment income but, more importantly, from successful results of our educational and revenue-producing activities. There was, at the same time, a somewhat offsetting rise in administrative costs, partly from salary and other administrative cost increases (including an initial charge of \$198,000 to establish a reserve for employees' accrued annual leave), but also reflecting greater assistance to a number of bureaus for special needs and urgent research projects.

The increase in investment income this year resulted primarily from the build-up in working capital and advance *Smithsonian* magazine subscription monies which made more funds available for investment in high quality short-term issues at prevailing high interest rates. As may be noted on the Balance Sheet, page 48, current fund investments equaled \$8,298,000 as of June 30, 1974, compared to \$6,223,000 a year earlier; of the former amount, \$6,600,000 was invested in very high grade, short-term securities and bank certificates of deposit.

The *Smithsonian* magazine was responsible for the largest share of the net gain from revenue-producing activities. As shown in Table 8, its income for the year rose to \$1,327,000, from \$330,000 in the previous year. At June 30, 1974, there were 622,000 National Associate members and subscribers to the magazine, making it one of the fastest growing publications in the Nation. The Associates program also contributed heavily to this year's gains, with net income of \$263,000, versus a slight loss in fiscal year 1973. The Resident Asso-

TABLE 7. Unrestricted Private Funds General and Revenue Producing Activities

(Excluding Special Purpose Funds and Gifts to Endowment)
[In \$1,000's]

Item	FY 1971	FY 1972	FY 1973	FY 1974
INCOME				
General Income:				
Investments	\$ 334	\$ 334	\$ 436	\$ 744
Gifts	304	26	33	151
Concessions and miscellaneous	215	197	374	284
Total General Income	853	557	843	1,179
Revenue Producing Activities: Associates				
Smithsonian Magazine	(209)	2	330	1,327
Other	10	74	(43)	263
Shops	(80)	19	47	226
Press	(159)	(111)	(109)	(89)
Performing Arts	(78)	(50)	(65)	104
Product Development	(7.0)	(75)	69	37
Other Activities	(18)	(75)	(59)	(98)
Total Activities	(534)	(141)	170	1,770
Total Income	319	416	1,013	2,949
EXPENDITURES				
Administrative Expense	2,681	2,956	3,097	3,957
Less Administrative Recovery	2,254	2,639	2,772	3,345
Net Administrative Expense	427	317	325	612
Net Gain (Loss) before Transfers	(108)	99	688	2,337
Less Transfers:				•
To Plant	_	-	_	1,134
To Endowment	21	21	21	121
Other (Net)	21	17	124	307
Net Gain (Loss) after Transfers	(150)	61	543	775
Ending Balance	\$1,720	\$1,781	\$2,292*	\$3,067

^{*} Adjusted to reflect reclassification to Plant Funds of \$32,000 net investment in capitalized equipment.

ciates program continues to furnish great benefits to the Washington, D.C., community with its offering of classes, study trips, lectures, and exhibit openings; the Foreign Study Tours program has likewise gained enthusiastic acceptance.

Table 8. Revenue Producing Activities for Fiscal Year 1974
[In \$1,000's]

				Assoc	iates			
Item	Museum Total Shops			Smith- sonian Maga- zine Other		forming		
Sales and Revenues Less Cost of	12,473	2,141	111	7,127	1,778	597	107	612
	6,918	1,211	83	4,426	886	145		167
Gross Income	5,555	930	28	2,701	892	452	107	445
Gifts Other Income Total	260 2	_			260			
Income	5,817	930	28	2,701	1,152	452	107	447
Expenses Administrative	3,586	604	105	1,174	820	314	64	505
Costs Income (Loss) before	461	100	12	200	69	34	6	40
Transfers Less Transfers	1,770 28	226	(89) (5)	1,327	263 -	104	37 33***	(98)
Net Income (Loss)	1,742	226	(84)	1,327	263	104	4	(98)

^{*} The privately funded activities of the Press as opposed to the federally supported publication of research papers.

*** This includes allocations to the Press and other Smithsonian bureaus participating in this program.

The profitability of the Museum Shops also increased dramatically, from \$47,000 in fiscal 1973 to \$226,000 in fiscal 1974, due in large measure to improved management practices and increased emphasis on higher quality merchandise relevant to the collections exhibited in the various Smithsonian museums. As with the Product Development Program, which transferred \$33,000 of royalities to individual bureaus, income from the Museum Shops will in the future be shared with the museums for their use in public education programs and purchases for the collections.

The Performing Arts Division produced an extremely successful record album, the *History of Jazz*, which enabled them to show a gain of \$104,000 in this fiscal year, as opposed to a deficit of \$65,000

^{**} Includes Traveling Exhibitions, Belmont Conference Center, Photo Sales, "Commons" Restaurant, Center for Short-Lived Phenomena, Special Publications, and Television Programs.

in fiscal year 1973. Another "bestseller" was the guidebook, *Seeing the Smithsonian*, developed by the Smithsonian Press and Product Development Offices in cooperation with the CBS Publishing Company; its sales added substantially to the profitability of the Museum Shops.

As any surplus funds accrue from project receipts of the shops or the Associates program an appropriate effort is made to return this in kind to the public in the form of improved public facilities, improved public reference books or publications, and improved public exhibits. As an example, the unusually large net gain in unrestricted private funds in fiscal year 1974 coincided with urgent requirements for construction funds, necessitating transfers of \$1,134,000 to the Institution's plant funds, with other transfers to Special Purpose funds, Restricted Funds, and Endowment Funds bringing total transfers to \$1,561,000 (see Table 7). Of the transfers to plant funds, \$365,000 was set aside to redesign and reconstruct the museum shop in the National Museum of History and Technology. Another \$500,-000 was reserved for a part of the costs of the proposed construction of additional public service facilities in the West Court of the National Museum of Natural History. Finally, \$150,000 was transferred to cover a part of the cost of a visitor's study center at the Chesapeake Bay Center for Environmental Studies, and \$119,000 was transferred for computer and equipment purchases. Other transfers from unrestricted funds include allocations toward operations of the Cooper-Hewitt Museum (\$178,000), special research grants to Smithsonian scientists (\$49,000), and transfers to Endowment (\$121,000) which includes a beguest of \$100,000 from the estate of Paula Lambert.

A new category of unrestricted private funds ("Special Purpose") is set out separately this year, namely, those which are legally unrestricted but which have been designated by management to be reserved for specific uses (see Table 6). These accounts, previously treated as a part of Restricted Funds, include, for example, receipts from parking at the Zoo (reserved to aid future construction of additional parking facilities for visitors), and revenues from various minor enterprises in individual museums (e.g., charges for tourguide audiophone equipment, etc.) and related expenditures of these monies, chiefly for improvement of exhibits. As of June 30, 1974, balances of these funds totaled \$460,000, an increase of \$259,000 in the year.

Table 9. Restricted Operating Private Funds,* Fiscal Year 1974
[In \$1,000's]

		Inco	оте				Net in-	Fund
Fund	Invest- Miscel- ment Gifts laneous		Total in- Deduc- come tions		Trans- fers in (out)	crease	balance end of	
Archives of American Art	\$ 1	\$ 19	\$186	\$ 206	\$ 203	\$ 9	\$ 12	\$ 205
American Banking Exhibit	_	285	_	285	17	_	268	268
American Maritime Hall		52	_	52	_	_	52	166
Cooper-Hewitt Museum: Operations Funds for Collection and other Special	6	29	38	73	190	232	115	_
Purpose Funds	_	70	_	70	47	10	33	582
Fort Pierce Bureau	530	385	28	943	1,008	300	235	192
Freer Gallery	876	100	200	1,176	1,134	_	42	191
Hillwood	_	299	1	300	210	_	90	79
Reading is FUNdamental	_	_	_	_	532	_	(532)	180
Other	337	731	93	1,161	1,104	(115)	(58)	939
Total Restricted Funds	\$1,750	\$1,970	\$546	\$4,266	\$4,445	\$436	\$257	\$2,802

^{*} Excluding Grants and Contracts shown in Table 5 and also Restricted Plant Funds included in Table 6.

RESTRICTED PRIVATE FUNDS

The Restricted Private Funds of the Institution, which support a wide variety of activities even beyond the major ones highlighted in Table 9, received \$4,266,000 for operating purposes in fiscal year 1974. The Freer Gallery of Art and the Fort Pierce Bureau depend primarily on income from their endowment funds, while the Cooper-Hewitt Museum of Decorative Arts and Design and the Archives of American Art, although receiving some federal support, must look to gifts, grants, memberships, and various money-raising efforts for their principal operating funds. In addition, it was necessary to transfer \$178,000 of private unrestricted funds to Cooper-Hewitt in fiscal year 1974 to eliminate operating deficits accumulated over this and previous years.

In September 1973, at the death of Mrs. Marjorie Merriweather Post, the responsibility for her "Hillwood" estate and the extraordinary collections it contains passed to the Smithsonian. A trust fund was provided by her will for the maintenance and operation of Hill-wood, but the estate had not yet been settled at year-end; part-year income and expenditures for this new project are reflected in the Restricted Private Funds table.

The National Museum of History and Technology is conducting a fund-raising campaign, with strong support from industry, to enable creation of a new exhibit "Hall of American Maritime Enterprise" devoted to national marine history. As of June 30, 1974, \$166,000 had been raised with additional pledges received of over \$100,000.

A gift of \$1 million was received from Joseph H. Hirshhorn in fiscal year 1974 to be used to complete construction of the Hirshhorn Museum and Sculpture Garden, due to open to the public in October 1974. This gift is reflected in the restricted gifts total in Table 6 in the category of Plant Funds along with other gifts and miscellaneous revenues for the new Chesapeake Bay Center building (\$70,000) and renovation of the Carnegie Mansion for the Cooper-Hewitt Museum (\$262,000).

ENDOWMENT FUNDS

The Smithsonian endowment includes three separate investment funds: the Freer Fund, whose income is used solely by the Freer Gallery of Art; Endowment Fund No. 3, which supports oceanographic research at the Fort Pierce Bureau in Florida; and the Consolidated Fund, which is an investment pool of all other Smithsonian restricted and unrestricted endowment funds, although distinct administration and accounting is maintained on each individual fund. Changes in market values of these funds since 1970, reflecting additions from donations and reinvestment of income, limited withdrawals, and changes in securities valuations are shown in Table 10.

TABLE 10. Market Values of Endowment Funds
[In \$1,000's]

 Fund	6/30/70	6/30/71	6/30/72	6/30/73	6/30/74
Freer	\$14,987	\$18,805	\$21,973	\$18,279	\$14,250
Endowment No. 3	5,433	12,331	14,641	13,196	11,128
Consolidated	8,998	11,470	13,287	12,393	10,172
Total	\$29,418	\$42,606	\$49,901	\$43,868	\$35,550

As detailed in previous Smithsonian Annual Reports, the investment of these three endowments is managed by three professional advisory firms, under the close supervision of the Investment Policy Committee and the Treasurer, and subject to policy guidelines set by the Smithsonian's Board of Regents. Under the Total Return policy, adopted for all funds by the Board of Regents in 1972, the income to be paid each fund in the subsequent fiscal year is determined each March 31 by computing 4½ percent of the running five-year average of market values. By selecting a fixed rate of return, regardless of what the actual yield may be, the investment advisors are free to choose the most attractive securities without being limited by the need to achieve a specified dividend and interest income level and at the same time Smithsonian budgeting procedures are simplified.

Table 11. Changes in Endowment Funds for Fiscal Year 1974
[In \$1,000's]

Fund	Market value 6/30/73	Gifts and transfers	Interest and dividends*	Income paid out	Sub- total	Decline in market value	Market value 6/30/74
Freer Fund	\$18,279	\$ -	\$ 670	\$ 876	\$18,073	3 \$3,823	\$14,250
Fund No. 3 Consolidated	13,196	(300)	445	520	12,821	1,693	11,128
Fund	12,393	297	478	552	12,616	2,444	10,172
Total**	\$43,868*	* \$ (3)	\$1,593	\$1,948	\$43,510	\$7,960	\$35,550

^{*} Income earned less managers' fees.

As shown in Table 11, the market values of the endowment funds suffered badly in fiscal year 1974, sharing fully in the general stock market decline. This fall in market values will have the effect in fiscal year 1975 of reducing the Total Return income to the Freer and Consolidated Funds to somewhat below the level of fiscal year 1974, although still higher than prior years.

^{**} Not including Endowment Funds of \$1,000,000 held in U.S. Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

Gifts, bequests, and reinvestment of income in certain restricted funds added \$297,000 to the Consolidated Fund, and a transfer of \$300,000 was made from Endowment Fund No. 3 to permit completion of the RV *Johnson* submarine tender as well as to cover costs relating to the entrapment of the submersible *Johnson-Sea-Link* in June 1973. Income totaling \$1,948,000, net of managers' fees, was paid out under the Total Return policy described above; this was \$355,000 in excess of dividend and interest yield on these Endowment Funds in the year. Market valuations and income of the individual restricted funds participating in the Consolidated pool are shown in Table 12, and detail on the funds by types of securities held is given in Table 13. A listing of the individual investments held in the various endowment funds at June 30, 1974, may be obtained upon request to the Treasurer of the Institution.

Accounting and Auditing

The Private Trust Funds of the Institution, as well as the accounts of Smithsonian Science Information Exchange, Inc., the Smithsonian Research Foundation, and Reading-Is-Fundamental, Inc., are audited annually by independent public accountants. Their report for fiscal year 1974 on the Smithsonian is contained in the following pages, including a comparative balance sheet and a statement of changes in the various fund balances. Extensive changes in accounting treatment of a number of items in accordance with new guidelines established by the American Institute of Certified Public Accountants have been referred to at length in the Notes to these statements and are reflected in the tables in this report dealing with Unrestricted and Restricted Private Funds.

The Defense Contract Audit Agency annually performs an audit on grant and contract monies received from federal agencies. In addition, the federally appropriated funds of the Institution are subject to audit by the General Accounting Office. The internal audit staff continues to conduct audits throughout the wide range of Smithsonian activities and contributes greatly to smooth administrative and financial management.

Table 12. Consolidated Fund, June 30, 1974

	Prin	cipal	Income				
Funds participating in pool	Book value	Market value	1974 Net income	Unex- pended balance			
UNRESTRICTED FUNDS	\$ 4,616,391	\$ 3,809,559	\$219,510 \$	_			
RESTRICTED FUNDS							
Abbott, William L	211,924	187,195	11,420	2,411			
Archives of American Art	21,986	19,081		_			
Armstrong, Edwin James	4,133	3,176	185	_			
Arthur, James	62,497	70,039	3,575	5,821			
Bacon, Virginia Purdy	184,850	146,095	8,913	18,728			
Baird, Spencer Fullerton	57,364	62,608	3,197	_			
Barney, Alice Pike	44,821	50,191	2,562	6,240			
Barstow, Frederic D	2,032	1,792	110	1,806			
Batchelor, Emma E	67,414	52,069	3,176	6,066			
Beauregard, Catherine							
Memorial Fund	77,837	69,749	792	791			
Becker, George F	317,610	252,863	15,428	10,763			
Brown, Roland W	51,303	47,868	2,443	7,595			
Canfield, Frederick A	59,323	77,168	3,940	_			
Casey, Thomas Lincoln	25,489	22,552	1,376	1,856			
Chamberlain, Frances Lea	44,007	49,281	2,515	5,859			
Cooper, G. Arthur, Curator's Fund	2,840	2,294	97	_			
Cooper-Hewitt Museum	158,973	121,148	5,822	_			
Desautels, Paul E	1,463	1,159	52	52			
Div. of Mammal Curator Fund	3,366	2,863	146	920			
Div. of Reptiles Curator Fund	1,006	847	38	120			
Drake, Carl J	283,815	230,827	11,562	25,406			
Dykes, Charles	87,541	77,416	4,723	12,500			
Eickemeyer, Florence Brevoort	16,988	19,015	971	2,602			
Guggenheim, David and Florence	238,898	179,715		_			
Hanson, Martin Gustav and							
Caroline Runice	18,077	15,986	975	9,919			
Henderson, Edward P. Meteorite Fund	623	623	manp	_			
Hillyer, Virgil	13,365	11,826	721	3,548			
Hitchcock, Albert S	2,464	2,806	143	331			
Hrdlicka, Ales and Marie	95,780	87,196	4,451	6,030			
Hughes, Bruce	29,910	33,536	1,712	24,641			
Johnson, E. R. Fenimore	16,361	11,836	722	4,732			
Kellogg, Remington, Memorial	48,275	33,947	2,054	1,442			
Lindsey, Jessie H	587	493	25	633			
Loeb, Morris	177,619	158,544	9,673	1,207			
Long, Annette E. and Edith C	848	976		232			
Lyons, Marcus Ward	8,778	6,390	390	_			
Maxwell, Mary E	30,650	34,361		8,365			
Myer, Catherine Walden	41,084	36,336		4,220			

TABLE 12. Consolidated Fund, June 30, 1974—continued

	Prin	cipal	Inc	Income				
Funds participating in pool	Book value	Market value	1974 Net incom	Unex- pended e balance				
Nelson, Edward William	\$ 37,315	\$ 38,911	\$ 1,987	\$ -				
Noyes, Frank B	1,976	1,831	112	1,237				
Pell, Cornelia Livingston	15,091	13,414	818	5,849				
Petrocelli, Joseph, Memorial Ramsey, Admiral and Mrs.	11,582	13,033	665	8,540				
DeWitt Clinton	527,193	387,110	23,857	15,467				
Rathbun, Richard, Memorial	21,648	19,220	1,172	11,701				
Reid, Addison T	36,166	31,982	1,951	2,852				
Roebling Collection	188,656	210,194	10,730	1,059				
Roebling Solar Research	50,163	41,324	2,521	962				
Rollins, Miriam and William	298,674	296,708	14,862	_				
Ruef, Bertha M	63,809	45,991	2,101	2,809				
Smithsonian Agency Account	186,886	138,087	7,417	_				
Sprague, Joseph White	2,179,658	1,785,177	89,418	1,746				
Springer, Frank	28,025	31,366	1,601	20,767				
Stevenson, John A	9,525	8,522	435	-				
Strong, Julia D	20,348	18,061	1,101	4,559				
T.F.H. Publications, Inc	13,539	9,554	523	9,816				
Walcott, Charles D	191,293	185,590	9,296	11,323				
Walcott, Charles D. and Mary Vaux	719,110	804,766	41,084	20,114				
Walcott Botanical Publications	90,618	97,623	4,984	15				
Zerbee, Francis Brinckle	1,483	1,649	84	1,718				
Total Restricted Funds	\$ 7,204,659	\$ 6,361,980	\$332,666	\$295,370				
Total Consolidated Funds	\$11,821,050	\$10,171,539	\$552,176	\$295,370				

TABLE 13. Endowment and Similar Funds Summary of Investments

Accounts	Book value 6/30/74	Market value 6/30/74
INVESTMENT ACCOUNTS		
Freer Fund: TCash: 13Endowment.and Similar Funds S	usms44442 2.755.871	Ingestate,145 2,559,139
Bonds	1,657,791	2,539,139 1,360,919 Market value 9,785,271
Stocks	11,264,712	
-Total	\$16,222,816	\$14,249,771
Consolidated Funds COUNTS	¢ 01 909	\$ 01.808
E.Cash und. Bonds Convertible Bonds	\$ 91,898 \$ 2,981,194 2,755,87]	\$ 91,898 2,785,227 2,559,139
Stocks rtible Bonds	8,747,958	7,294,414 7,294,414
Total	\$11,821,050 \$16,222,816	\$10,171,539 \$14,249,771
Cash idated , unds: Bonds Convertible Bonds	\$ 108,931 \$ 2,996,566 202,878	\$ 108,931 2,916,807 159,155
Stocks Tible, ponás	9,423,532 ⁰	7,944,033
Total	\$12,731,907 \$11,821,050	\$11,128,926 \$10,171,539
Cash Return No.3: Bonds Common Stocks	\$ 731 5 1987631 2,9303526	\$ 19843731 2,9863731 2,9863732
Total	\$ 9,13,8222	\$ 7,18,204
Total Investment Accounts .,,,,,,	. \$40,7,89 <u>]</u> 5957	\$35,568,440
Other Accounts: Notes Receivable Loan-to U.S. Treasury in Perpetuity	\$\$ 49,9761 1,000,000	\$\$ 49,973 1,000,000
Total Other Accounts	\$ 1,049,966	\$ 1,049,966
Total Endowment and Similar Fund Balances	\$41,839,5613	\$36,618,406
Carei aric	. 5 49,900 1,000,000	
Uta. Offer Accounts	. = 1,049,960	5 1,049,96
ent to time. I and Similar Fund Balances	. \$41,639,56	1 \$36,618,40

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The Smithsonian Institution gratefully acknowledges gifts and bequests received during fiscal year 1974 from the following:

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We also gratefully acknowledge other contributions in the amount of \$229,197.80 received from more than 5,000 contributors in fiscal year 1974.

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS
1025 CONNECTICUT AVENUE, N. W.
WASHINGTON, D. C. 20036

The Board of Regents
Smithsonian Institution:

We have examined the balance sheet of the Private Funds of Smithsonian Institution as of June 30, 1974 and the related statement of changes in fund balances for the year then ended. Such statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts, nor other departments, bureaus and operations administered by the Institution under Federal appropriations as detailed in note 3 to the financial statements. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Private Funds of Smithsonian Institution at June 30, 1974 and the changes in its fund balances for the year then ended, in conformity with generally accepted accounting principles which, except for the changes referred to in note 1a to the financial statements, with which we concur, have been applied on a basis consistent with that of the preceding year.

PEAT, MARWICK, MITCHELL & CO.

September 5, 1974

SMITHSONIAN INSTITUTION - PRIVATE FUNDS

Balance Sheet

June 30, 1974

(with comparative figures for 1973)

Assets	1974	1973
CURRENT FUNDS:		
Cash: In U. S. Treasury In banks and on hand	\$ 139,352 651,485	293,324 413,499
Total cash	790,837	706,823
Investments (note 2)	8,298,318	6,223,305
Receivables: Accounts, less allowance for doubtful accounts		
of \$200,000 (\$194,486 in 1973)	1,247,671 203,705	935,486 172,568
Reimbursement — grants and contracts Due from agency funds	2,261,103 136,151	1,061,872
Total receivables	3,848,630	2,169,926
Inventories Prepaid expenses	780,054 420,272	602,254 456,659
Deferred expenses	1,208,561	769,670
Total current funds	\$15,346,672	10,928,637
ENDOWMENT AND SIMILAR FUNDS:		
Cash and receivables for securities sold	506,035	359,353
Notes receivable	49,966	51,486
Due from current funds	239,967	_
Investments (note 2)	1,000,000	41,266,827 1,000,000
Total endowment and similar funds	\$41,839,561	42,677,666
PLANT FUNDS:		
Due from current funds	1,934,519	938,480
Real estate (note 5) Equipment, less accumulated depreciation of	4,847,870	3,471,825
\$409,830 (\$303,385 in 1973) (note 4)	237,025	328,107
Total plant funds	\$ 7,019,414	4,738,412
AGENCY FUNDS:		
Investments	10,000	_
Due from current funds	213,100	130,814
Total agency funds	\$ 223,100	130,814
See accompanying notes to financial statements.		

SMITHSONIAN INSTITUTION – PRIVATE FUNDS Balance Sheet

June 30, 1974

(with comparative figures for 1973)

Liabilities and Fund Balances	1974	1973
CURRENT FUNDS:		
Accounts payable and accrued liabilities	\$ 2,596,331 1,934,519 213,100	1,701,665 938,480 130,814
Due to endowment and similar funds Deferred income:	239,967	_
Magazine subscriptionsOther	3,645,757	2,746,892
Total liabilities	8,964,629	5,808,411
Fund balances: Unrestricted:		
General purpose	3,066,594 460,544	2,292,017
Total unrestricted	3,527,138	2,493,508
Restricted	2,854,905	2,626,718
Total fund balances	6,382,043	5,120,226
Total current funds	\$15,346,672 =======	10,928,637
ENDOWMENT AND SIMILAR FUNDS:		
Fund balances:		
Endowment	34,999,970	35,844,768
Restricted	2,286,057	2,304,158
Unrestricted	4,553,534	4,528,740
Total quasi-endowment	6,839,591	6,832,898
Total endowment and similar funds	\$41,839,561	42,677,666
PLANT FUNDS:		
Note payable (note 4)	191,843	295,761
Mortgage notes payable (note 5)	349,617	432,534
Accrued liabilities	36,832	_
Acquisition fund: Unrestricted	933,661	_
Restricted	964,026	938,480
	1,897,687	938,480
Investment in plant	4,543,435	3,071,637
Total plant funds	\$ 7,019,414	4,738,412
AGENCY FUNDS:		
Due to current funds	136,151	-
Deposits held in custody for others	86,949	130,814
Total agency funds	\$ 223,100	130,814

SMITHSONIAN INSTITUTION – PRIVATE FUNDS Statement of Changes in Fund Balances

Year ended June 30, 1974

	77	l'Iant funds	Investment n in plant		1 1			1 1		1,583,504	- (1703)		1,578,243		1	1	1		ı	106 445	C##'001	106,445		1	1		1 1	1	1	D		1,471,798	3,071,637	4,543,435	
	c	L'iani	Acquisition		1			1,187,502		l	1 0 2 4	450'##T	1,332,361		1	I	1	1,281,409	192,095	33,930		1,507,434		103,917	l	1,015,000		15,363	-	I	1,134,280	959,207	938,480	1,897,687	
		Endowment	and sımilar funds		1 1		1 00 000	(480,095) 105,260		1	1	1	(374,835)		1	1	1	ı	1	I	1	1		1	(355,376)	1 3	71,106	20,554	(300,000)	1	(463,270)	(838,105)	42,677,666	41,839,561	
			Restricted		9,967,552	007	1,429,500	1,969,675		I	- 101 373	101,010	13,912,834		11,967,493	2,469,672	I	1	I	1		14,437,165		ı	321,055	1 (20 + + + + + + + + + + + + + + + + + + +	(/1/106)	202,569	300,000	I	752,518	228,187	2,626,718	2,854,905	
		-	5pecial purposes		141,926		3,104	123,357		I	106,994	77,70	406,728		123,824	12,532	115,652	I	I	I		252,008		ı	1	I	l J	104,333	1	1	104,333	259,053	201,491	460,544	
funds	rted		Activities		12,473,118		1	259,881		1	1	7777	12,735,223		Î	461,298	10,503,508	I	I	I i		10,964,806		I	1	I	l 1	(28,360)	1	(1,742,057)	(1,770,417)	ı		t	
Current funds	Unrestricted		General		1 1	7	726,312	150,586		I	511,779	110,121	1,546,231		571,236	442,974	1	1	I	I		1,014,210		(103,917)	34,321	(1,015,000)	(100.446)	(314,459)		1,742,057	242,556	774,577	2,292,017	3,066,594	
		Total	unrestricted funds		12,615,044	744 000	0/4/67/	(16,243) 533,824		1	618,773	000,107	14,688,182		090'569	916,804	10,619,160	1	I	1		12,231,024		(103,917)	34,321	(1,015,000)	(100.446)	(238,486)	1	1	(1,423,528)	1,033,630	2,493,508	3,527,138	Marine III
		Total	current funds		\$12,615,044 9,967,552	000	726,051,7	(16,243) 2,503,499		I	618,773	104,001	28,601,016		12,662,553	3,386,476	10,619,160	1	I	1		26,668,189		(103,917)	355,376	(1,015,000)	(71,100)	(35,917)	300,000	I	(671,010)	1,261,817	5,120,226	\$ 6,382,043	
				REVENUE AND OTHER ADDITIONS:		Investment income (net of \$108,752 management	and custodian fees)	Gains (losses) on sale of securities	Additions to equity in real estate and capitalized equipment (including \$110,000 of	land acquired in prior year)	Rentals, fees, and commissions		Total revenue and other additions	EXPENDITURES AND OTHER DEDUCTIONS:	Research and educational expenditures	Administrative expenditures	Auxiliary enterprises expenditures	Expended for real estate and equipment	Ketirement of indebtedness	Interest on Indeptedness	Depteriation	Total expenditures and other deductions	TRANSFERS AMONG FUNDS — ADDITIONS (DEDUCTIONS):	Mandatory - principal and interest on note	Portion of investment gain appropriated	For plant acquisition	Appropriated as quasi-endowment	For designated purposes	Endowment released	Net increase in activities	Total transfers among funds — additions (deductions)	Net increase (decrease) for the year	Fund balances at June 30, 1973	Fund balances at June 30, 1974	Concentration of the first of the contract of

SMITHSONIAN INSTITUTION – PRIVATE FUNDS Notes to Financial Statements

June 30, 1974

1. Summary of Significant Accounting Policies

a. Accrual Basis — The financial statements of Smithsonian Institution have been prepared on the accrual basis, except for depreciation accounting as explained in note 1g below, and are in conformity with generally accepted accounting principles included in the recently issued American Institute of Certified Public Accountants Audit Guide "Audits of Colleges and Universities". In accordance with the requirements of the Guide, annual leave and interest income on endowment and similar fund investments have been accrued at June 30, 1974 and, in addition, certain changes in financial statement classification have been adopted. The effect of such changes in classifications on beginning fund balances is as follows:

Endowment and

			similar					
_	Curren	t funds		Quasi-	Plant	Agency		
	Unrestricted	Restricted	Endowment	endowment	funds	funds		
Balance at June 30, 1973 as previously reported Reclassify fund restricted for construction	\$2,323,958	3,897,908	36,913,730	5,763,936	3,039,291	-		
and acquisi- tion of real estate Reclassify funds that are inter- nally restricted		(938,480)	~	-	938,480	_		
by the Insti- tution Net assets	201,896	(201,896)	-	-		-		
transferred to plant fund Reclassify mis- cellaneous	(32,346)	-	-	-	32,346	-		
funds to agency status Reclassify	-	(130,814)	-	-	-	130,814		
endowments			(1,068,962)	1,068,962				
Balance at June 30, 1973 as restated	\$2,493,508	2,626,718	35,844,768	6,832,898	4,010,117	130,814		
			=====			====		

Current funds used to finance the acquisition of plant assets and for provisions for debt amortization and interest are accounted for as transfers to the plant fund.

b. Fund Accounting — In order to ensure observance of limitations and restrictions placed on the use of the resources available to the Institution, the accounts of the Institution are maintained in accordance with the prin-

ciples of "fund accounting". This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds that are in accordance with activities or objectives specified. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups. Accordingly, all financial transactions have been recorded and reported by fund group.

Within each fund group, fund balances restricted by outside sources are so indicated and are distinguished from unrestricted funds allocated to specific purposes by action of the governing board. Externally restricted funds may only be utilized in accordance with the purposes established by the source of such funds and are in contrast with unrestricted funds over which the governing board retains full control to use in achieving any of its institutional purposes.

Endowment funds are subject to the restrictions of gift instruments requiring in perpetuity that the principal be invested and the income only be utilized. Also classified as endowment funds are gifts which will allow the expenditure of principal but only under certain specified conditions.

Unrestricted quasi-endowment funds have been established by the governing board for the same purposes as endowment funds, any portion of such funds may be expended. Restricted quasi-endowment funds represent gifts for restricted purposes where there is no stipulation that the principal be maintained in perpetuity or for a period of time, but the governing board has elected to invest the principal and expend only the income for the purpose stipulated by the donor.

All gains and losses arising from the sale, collection, or other disposition of investments and other noncash assets are accounted for in the fund which owned such assets. Ordinary income derived from investments, receivables, and the like, is accounted for in the fund owning such assets, except for income derived from investments of endowment and similar funds, which income is accounted for in the fund to which it is restricted or, if unrestricted, as revenues in unrestricted current funds.

All other unrestricted revenue is accounted for in the unrestricted current fund. Restricted gifts, grants, endowment income, and other restricted resources are accounted for in the appropriate restricted funds.

- c. Investments are recorded at cost or fair market value at date of acquisition when acquired by gift.
- d. Inventories are carried at lower of average cost or net realizable value.
- e. Income and expenses in respect to the Institution's magazine and associates' activities are deferred and taken into income and expense over the applicable periods and are reported in the activities section of the current unrestricted funds.
- f. Endowment and Similar Fund Investments The Institution utilizes the "total return" approach to investment management of endowment funds and quasi-endowment funds. Under this approach, the total investment return is considered to include realized and unrealized gains and losses in addition to interest and dividends. In applying this approach, it is the Institution's policy to provide 4½% of the five year average of the market value of each fund (adjusted for gifts and transfers during this period) as being available for current expenditures; however, where the market value of the assets of any fund is less than 110% of the historic dollar value (value of gifts at date of donation) the amount provided is limited to only interest and dividends received.

g. Plant Fund Assets - Plant fund assets are recorded as follows:

Museum shop and computer equipment purchased with Private Funds is capitalized in the plant fund at cost, and is depreciated on a straight-line basis over an estimated useful life of five years.

Real estate (land and buildings) are recorded in the plant fund at cost, to the extent that restricted or unrestricted funds were expended therefor, or appraised value at date of gift, except for gifts of certain islands in Chesapeake Bay, Carnegie Mansion, and Hillwood Estate which have been recorded at nominal values. Depreciation on buildings is not recorded.

All the other land and buildings (principally acquired with Federal funds), fixtures, equipment, works of art, living or other specimens are not reflected in the accompanying financial statements.

Funds, previously recorded in the current funds group, whose purpose is for construction and acquisition of plant assets, have been reclassified to plant funds.

- h. Agency Funds The agency funds group consists of funds held by the Institution as custodian or fiscal agent for others.
- i. Pension Costs -- All pension costs are funded as accrued.

2. Investments

Quoted market values and carrying values of investments (all marketable securities) of the funds indicated were as follows:

	June 3	0, 1974	June 30, 1973					
	Carrying value	Market value	Carrying value	Market value				
Current funds Endowment and similar	\$ 8,298,318	7,971,088	6,223,305	6,078,226				
funds	40,043,593	34,822,438	41,266,827	43,530,142				
Total investments	\$48,341,911	42,793,526	47,490,132	49,608,368				

Total investment performance is summarized below:

	Net gains (losses)						
-	Current funds	Endowment and similar funds	Total				
Unrealized gains (losses):							
June 30, 1974	\$(327,230)	(5,221,155)	(5,548,385)				
June 30, 1973	(145,079)	2,263,315	2,118,236				
Increase in unrealized		-					
gains (losses) for year	(182,151)	(7,484,470)	(7,666,621)				
Realized net losses for year	(16,243)	(480,095)	(496,338)				
Total net losses for year	\$(198,394)	(7,964,565)	(8,162,959)				

Assets of the endowment and similar funds having a carrying value of \$11,845,384 are pooled on a market value basis (consolidated fund) with each individual fund subscribing to or disposing of units on the basis of

the value per unit at market value at the beginning of the calendar quarter within which the transaction takes place. Of the total units each having a market value of \$84.60 (\$105.22 in 1973), 67,856 units were owned by endowment, and 52,665 units by quasi-endowment at June 30, 1974.

3. Related Activities

Federal appropriations, which are not reflected in the accompanying financial statements, provide major support for the operations and administration of the educational and research programs of the Institution's many museums, art galleries and other bureaus, as well as for the maintenance and construction of related buildings and facilities. In addition, land, buildings and other assets acquired with Federal funds are not reflected in the accompanying financial statements.

The following Federal appropriations were received by the Institution for the fiscal year ended June 30, 1974:

Operating funds\$60,562,900
Special foreign currency program 4,500,000
Construction funds
\$86,922,900

4. Note Payable

The note payable in the principal amount of \$191,843 (\$295,761 in 1973) which is non-interest bearing, is secured by computer equipment and is payable in monthly installments of \$7,993 to June 30, 1976.

5. Mortgage Notes Payable

The mortgage notes payable are secured by first deeds of trust on property acquired in connection with the Chesapeake Bay Center. The details of the mortgage notes payable are as follows:

•	June 30,	
	1974	1973
Mortgage note, payable in semi-annual installments of \$13,300, plus interest at the prevailing prime rate at the due date of the installment payment		
but not less than 8%, due July 1, 1980 6% mortgage note payable, due in monthly install- ments of \$451 including interest, due November 1,	\$172,900	199,500
1989	36,717	33,034
1979	110,000	140,000
of \$30,000, plus interest, due November 1, 1974	30,000	60,000
	\$349,617	432,534

6. Pension Plan

The Institution has a contributory pension plan providing for the purchase of retirement annuity contracts for all employees meeting certain age and length of service requirements. Under terms of the plan, the Institution contributes the amount necessary to bring the total contribution to 12% of the participants' compensation subject to social security taxes and to 17% of the participants' compensation in excess of that amount. The total pension expense for the year was \$729,068 (\$688,782 in 1973).



